



주 아세안 대한민국 대표부
Mission of the Republic of Korea to ASEAN

JUNE 23RD 2022

The Way Forward for a Stronger Regional and International Cooperation on Marine Plastic Debris

Online Forum Summary Report



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Summary Report of the Online Forum

JUNE 23RD 2022

Organized by:

Mission of the Republic of Korea to ASEAN
Economic Research Institute for ASEAN and East Asia (ERIA)

Date: 23 June, Thursday, 2022

Time: 09:00 - 11:30 (GMT+7) / 11:00 - 13:30 (GMT+9)

Format: Zoom Webinar

Program:

The Way Forward for a Stronger Regional and International Cooperation
on Marine Plastic Debris

Online Forum Summary Report

The Way Forward for a Stronger Regional and International Cooperation on Marine Plastic Debris

Southeast Asia is regarded as one of the largest global contributors to marine plastic pollution stemming from its rapid economic growth and insufficient solid waste management infrastructures. The alarming situation is of particular concern and has worsened since the COVID-19 pandemic as efforts to resolve marine plastic debris (MPD) were overshadowed by the skyrocketing plastic use including exponential production and disposal of personal protective equipment. Urgent action is required to protect Southeast Asia's marine life and ecosystems, particularly as recent scientific research indicates a growing problem of microplastics in animals and humans. The negative effect of plastic pollution underscores the importance of taking preventative actions to mitigate greater damage.

The Mission of the Republic of Korea to ASEAN in collaboration with the Economic Research Institute for ASEAN and East Asia's (ERIA) Regional Knowledge Centre for Marine Plastic Debris (RKC-MPD) hosted an online forum to raise awareness of the critical situation surrounding MPD in the ASEAN region and of the necessary actions to overcome this issue globally. The RKC-MPD was established in 2019 to provide the ASEAN+3 Member States with support in addressing emerging challenges associated with marine debris.

Ambassador of the Republic of Korea to ASEAN, H.E. Kwon Hee-seog, along with Deputy Secretary-General of ASEAN for ASEAN Socio-Cultural Community H.E. Ekkaphab Phanthavong, and Permanent Representation of the Socialist Republic of Viet Nam to ASEAN, H.E. Nguyen Hai Bang, expressed their hope for the forum to foster positive efforts undertaken by relevant stakeholders to jointly find solutions to this global environmental concern.

Mr Tiat Jin Ooi, Lead Consultant to ERIA moderated the Forum which featured speakers from academia, industries, governments, and international organisations, reflecting the role these sectors have in the MPD discussion. Event speakers provided their views and policy recommendations to improve regional plastic pollution through effective solutions.

The Forum especially highlighted the United Nations Environment Assembly Resolution (UNEA-5.2), a ground-breaking initiative to propose an internationally legally binding agreement to manage plastic pollution by 2024. UNEA-5.2 targets the whole lifecycle of plastics starting from the production and design to disposal. The Mission of the Republic of Korea to ASEAN and the RKC-MPD set out three objectives for the event:

- (1) Raise awareness of the current alarming situation
- (2) Take stock of the prevention and mitigation measures currently undertaken by different stakeholders, and
- (3) Discuss policy recommendations to advance the UNEA 5.2 Resolution for a legally binding international treaty

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Webinar Agenda

Time (GMT+7)	Agenda
09:00 - 09:15 (15 min)	Keynote Speech/Opening Remarks <ul style="list-style-type: none"> • H.E. Kwon Hee-seog, Ambassador of the Republic of Korea to ASEAN • H.E. Ekkaphab Phanthavong, Deputy Secretary-General of ASEAN for ASEAN Socio-Cultural Community (ASCC) • H.E. Nguyen Hai Bang, Permanent Representative of the Socialist Republic of Viet Nam to ASEAN
09:15 - 10:00 (45 min)	Session 1. Stocktaking of Regional efforts <ul style="list-style-type: none"> • Professor Suchana Apple Chavanich, Chulalongkorn University (Impacts of plastics on marine ecosystem) • Dr. Vong Sok, Head of Environment Division and Assistant Director of Sustainable Development Directorate of the ASEAN Secretariat (ASEAN Regional Action Plan 2021-25) • Mr. Joo-Young PARK, Korea Marine Environment Management Corporation (KOEM) (ASEAN-ROK cooperation in MPD issues)
10:00 - 11:00 (60 min)	Session 2. Ways to strengthen regional and international cooperation <ul style="list-style-type: none"> • Dr. Mushtaq Ahmed Memon, Regional Coordinator for Resource Efficiency, United Nations Environment Programme (UNEP) (The need to address the entire life cycle of plastics from upstream to downstream) • Dr Yulu LIU and Ms Cheng Ling LIM, Researchers, Ocean Law and Policy Programme, Centre for International Law (CIL), National University of Singapore (Policies on single-use-plastics restrictions in the ASEAN region and their effectiveness) • Mr. Edwin Seah, Advisor, Board of Advisors, TRIA Pte Ltd (Application of EPR system in ASEAN, its challenges and opportunities) • Professor Yong-Chul JANG, Chungnam National UNIVERSITY, Vice President and International Chair of Korea Society of Waste Management (on Good Practices on Plastic Waste Management)
11:00 - 11:30 (30 min)	Q&A session and Closing remark <ul style="list-style-type: none"> • Mr. Michikazu Kojima, Senior Advisor on Environmental Issues — ERIA

Biography of Guest Speakers



H.E. Ambassador Kwon Hee-seog

*Ambassador of the Republic of Korea to ASEAN
Mission of the Republic of Korea to ASEAN*

H.E. Kwon Hee-seog assumed the role as the Ambassador of the Mission of the Republic of Korea (ROK) to ASEAN in March 2022. In his capacity, Ambassador Kwon is dedicated to further strengthening ASEAN-ROK relations and deepening the existing institutional ties encompassing political-security, economic, and socio-cultural cooperation as envisioned in the ASEAN Community Vision 2025.

Prior to arriving in Jakarta, he was the Ambassador Extraordinary and Plenipotentiary to the Republic of Italy (2019-2021). In Korea, he has served as the Secretary to the President for National Security Strategy (2017-2019) and the Director-General for African and Middle Eastern Affairs at the Ministry of Foreign Affairs of the Republic of Korea (2014-2016).

Previously, Ambassador Kwon has served as Director for Provincial Reconstruction Team (PRT) in Afghanistan; Nuclear Counsellor at the Korean Mission to the UN in Vienna; and First Secretary at the Korean Mission to the UN in New York.



H.E. Ekkaphab Phanthavong

*Deputy Secretary-General (DSG) of ASEAN for
Socio-Cultural Community (ASCC)*

H.E. Ekkaphab Phanthavong is the Deputy Secretary-General (DSG) of ASEAN for Socio-Cultural Community (ASCC), a role he was appointed to in 2021 and will undertake through to 2024.

DSG Phanthavong supports the Secretary-General of ASEAN in the implementation of the ASCC Blueprint 2025 and leads the ASCC Department of the ASEAN Secretariat. He oversees the implementation of projects under ASCC that focus on forging a common identity and building a caring and sharing society.

DSG Phanthavong has served numerous appointments at the Lao PDR Ministry of Foreign Affairs (MOFA). Before assuming his current role, he was the Ambassador/Permanent Representative of Lao PDR to ASEAN from 2018-2021. Prior to that, he served as the Deputy Director-General of the ASEAN Department at the Lao PDR MOFA.

DSG Phanthavong holds an MA in International Relations from Flinders University, South Australia, and a diploma in English Language from the Pedagogical University of Vientiane, Laos.



H.E. Nguyen Hai Bang

*Permanent Representative of the
Socialist Republic of Viet Nam to ASEAN*

Ambassador Nguyen Hai Bang is the Permanent Representative of Viet Nam to ASEAN. He currently also sits as the Representative of Viet Nam to the Governing Council of the ASEAN Institute for Peace and Reconciliation (ASEAN-IPR).

Previously, he was Ambassador Extraordinary and Plenipotentiary of the Socialist Republic of Viet Nam to the Kingdom of Thailand (2017-2020). Prior to being appointed as Ambassador, Mr Nguyen Hai Bang was Director-General of the Department of Africa and the Middle East (2013-2017) at the Ministry of Foreign Affairs (MOFA) of Viet Nam, where he also served as Deputy Director-General prior (2011-2013). Moreover, he has served as Deputy Chief of Mission, Embassy of Viet Nam in Denmark (2007-2011); as Desk Officer, and then as Deputy Director-General, Europe Department, MOFA Viet Nam (2002-2007); Second Secretary, Embassy of Viet Nam in London, UK (1999-2002); Desk Officer, Europe Department, MOFA Viet Nam (1991-1999); and Desk Officer, Press and Information Department, MOFA Viet Nam (1988-1991).

Ambassador Nguyen Hai Bang graduated from the Diplomatic Academy of Viet Nam in 1985 and had his post-graduate study in the former Soviet Union. He also holds a Master of Public Policy from the Kennedy School of Government (1996-1997), Harvard University. Aside from his mother tongue, he speaks English, Japanese, and Russian. He is married with three children.

Session 1 Speakers

Stocktaking of regional efforts on marine plastic debris



Dr. Suchana Apple Chavanich

*Department of Marine Science, Faculty of Science
Chulalongkorn University, Thailand*

Dr Suchana Apple Chavanich is a professor at Department of Marine Science, Faculty of Science, Chulalongkorn University, Thailand. She has a broad base of ecological research interests that involve the study of nearshore species from tropical to polar regions. In addition, her research focuses on conservation and restoration of marine ecosystems and impact of climate change and marine debris on marine ecosystems.

Currently, Dr Chavanich has the projects related marine biodiversity and polar research under the Royal Initiative of Her Royal Highness Princess Maha Chakri Sirindhorn.

She is considered to be Thailand's first female scientist to go diving in Antarctica and the Arctic. Her research work on Arctic-Antarctica and coral reefs has inspired Thai and young people on the value of marine ecosystems. Because of her work, Dr Chavanich has received several awards and recognitions both nationally and internationally, for example:

- Explorer Award by National Geographic Magazine Thailand
- One of 17 Asia Power Women of Inspiration, selected by Her World Magazine
- One of the 100 Most Inspiring People in Thailand for 2013, selected by the In Residence
- UNESCO-IOC/WESTPAC Outstanding Scientist Award

Currently, Dr Chavanich is also the Sustainable Ocean Ambassador appointed by UN-AFMA-FAO Annex. She received her Ph.D. in Zoology at University of New Hampshire, USA.



Dr. Vong Sok

*Head of the Environment Division
Assistant Director of the Sustainable Development Directorate
ASEAN Socio-Cultural Community Department, ASEAN Secretariat*

Dr Vong Sok is a passionate and dedicated environmental professional, with over 20 years of global environmental compliance and governance experience, including in-depth knowledge of strategic environmental planning, environmental diplomacy, and operations control of environmental management systems.

He holds a bachelor's degree in Forestry from Cambodia and a master's degree in Environmental Science and Management from Belgium. He further completed a PhD in Impact Assessment and Climate Change at the University of Western Australia in 2012.

Dr Vong Sok works extensively on environmental management in Southeast Asia, in close collaboration with government agencies, international organizations, development partners, CSOs, and communities. This has provided him with specific resources to direct and coordinate the strategic level and make significant impacts and contributions to this region.



Mr. Juyoung Park

*International Affairs Specialist, Marine Litter Management Centre
Korea Marine Environment Management Corporation (KOEM)*

Mr Juyong Park is the International Affairs Specialist of the Marine Litter Management Centre within the Korea Marine Environment Management Corporation (KOEM). In his current role, he has implemented international public awareness projects on behalf of Ministry of Oceans and Fisheries of Korea and has been involved in organizing several bilateral and multilateral conferences, workshops and meetings.

During his tenure with the Global Agricultural Development Center of the Konkuk University, Mr Park was involved in the Korea International Cooperation Agency's official development assistance (ODA) project on Agricultural Education Training for Solomon Island Officials, in addition to undertaking various public relations and media related projects.

Mr Park graduated with a Bachelor of Public Administration from the Konkuk University in Seoul, Korea.

Session 2 Speakers

Ways to strengthen regional and international cooperation on marine plastic debris



Dr. Mushtaq Ahmed Memon

*Regional Coordinator for Chemicals and Pollution Action Sub-programme
United Nations Environment Programme, Regional Office for Asia and the Pacific*

Dr Mushtaq Ahmed Memon is the Regional Coordinator for Chemicals and Pollution Action Sub-programme with the United Nations Environment Programme, Regional Office for Asia and the Pacific (ROAP). He has worked with UNEP for more than 17 years, including for 11 years at UNEP-IETC for water and sanitation, and waste management; and five years at UNEP-ROAP. He was also working as Director for Rural Water Supply and Sanitation in Pakistan for 4 years. He has also served as a Port Engineer for 6 years.

At ROAP, Dr Memon served as the Sub-programme Coordinator for Resource Efficiency. He led UNEP's COVID-19 Response on Medical and Humanitarian Phase focusing on COVID-19 waste management. Dr Memon served as Project Manager for the Regional Policy Advocacy Component of the EU-funded SWITCH-Asia Programme to promote sustainable consumption and production and uptake of SDG 12 in Asia. He also implemented GO4SDGs in the region and led the Low-Carbon Lifestyle Challenge Start-ups.

He has a Doctorate in Environmental and Resource Economics from Hiroshima University in Japan, a Master's from the University of Bradford in the UK, a postgraduate diploma in Transport, and an undergraduate degree in Civil Engineering from Pakistan. Dr Memon has published various papers in international journals and has delivered various training programmes.



Dr. Yulu Liu

*Researcher at Ocean Law and Policy Programme, Centre for International Law (CIL),
National University of Singapore*

Dr Yulu Liu is a policy consultant at the Centre for International Law (CIL), National University of Singapore. She completed her PhD at the Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong. Her research areas include marine environmental protection, marine plastic pollution and the law of the sea.



Ms. Cheng Ling Lim

*Researcher at Ocean Law and Policy Programme, Centre for International Law (CIL),
National University of Singapore*

Ms Cheng Ling Lim is a research associate who joined the Ocean Law and Policy team in the Centre for International Law (CIL) at the National University of Singapore, to support the development of a regional knowledge organisation system for marine environmental data (KOSMESEA). Her focus areas are marine environmental databases and portals, marine aquaculture, pollution from marine plastics, as well as the development of regional research networks.



Mr. Edwin Seah

*Strategic & Sustainability Communications Consultant
Advisor, Board of Advisors, TRIA Pte. Ltd.*

Mr Edwin Seah is a Strategic and Sustainability Communications Consultant with over 20 years of senior level experience, and serves on the Board of Advisors for TRIA, a Singapore-based packaging, design, and sustainability solutions company.

His experiences span across regional public policy, sustainability, and strategic communications for government, industry, and non-profits. He co-authored the Sustainable Packaging Roadmap 2020-2024 for members of an industry association and helped push out an industry-led and region-first model process and material standard for the use of rPET in food grade packaging.

Mr Seah was instrumental in helping to establish the Circular Materials Lab, a packaging innovation platform to accelerate the discovery and adoption of next generation food-grade packaging and leading a partnership with the UNEP to undertake a regional study on tackling plastic waste in Southeast Asia.

He was also the Executive Director of an environmental NGO which administers Singapore's eco-label and worked closely with government, the private sector and schools in driving environmental sustainability.



Prof. Yong-Chul Jang

*Environmental Engineering
Chungnam National University*

Prof Yong-Chul Jang is currently the Professor of Environmental Engineering at the Chungnam National University, South Korea, a role undertaken since 2003.

Prof Jang is the Policy Advisor in the Ministry of Environment (Resource Circulation Division), and also Director of Daejeon Green Environment Center supported by the same Ministry.

He is the Vice President and Chair of the International Committee, Korea Academic Society of Waste Management, and also Associate Editor, Journal of Material Cycles and Waste Management.

Prof Jang received his PhD from the University of Florida in 2000.

Discussion Session Moderator



Mr. Michikazu Kojima

Senior Advisor on Environmental Issues – ERIA

Mr Michikazu Kojima is an economist specialising in environmental policies, especially waste management and recycling in Asian countries. He is currently serving as a Senior Advisor on Environmental issues at ERIA and leading the Regional Knowledge Centre for Marine Plastic Debris, which is the technical partner of the Republic of Korea's Mission to ASEAN to organize this online Forum. Since 2015 he has also held a position as a Chief Senior Researcher at the Institute of Developing Economies (IDE) under Japan External Trade Organization (JETRO).

He has long been actively engaged in the field of international cooperation and served as a member of the Expert Working Group on Environmentally Sound Management under the Basel Convention and the Technical Expert Committee for Green Industry Platform by UNIDO. His research has been focusing on waste management and resource circularity from a social-science perspectives.

Mr Kojima has been invited as a guest lecturer and visiting professor at many Universities in Japan and considers teaching the young generation as one of his vocations.

Facilitator



Mr. Tiat Jin (TJ) Ooi

*Lead Consultant of ERIA E-S-I Knowledge Lab
Founder and Principal Consultant of Curated Connectors*

With a career spanning more than 20 years, Mr Tiat Jin Ooi brings to the table a wide range of skill sets from strategic planning, organisational transformation, business development to corporate administration, events management, and public speaking.

In his ongoing work with the Economic Research Institute for ASEAN and East Asia (ERIA), he is also the Lead Consultant for the Entrepreneurship, Start-ups and Innovation (E-S-I) Knowledge Lab, an exciting initiative and exploration of the E-S-I ecosystems where research, thought leadership and business practicality blend together in evolving synergy.

Welcoming Remarks

H.E. Ambassador Kwon Hee-seog, Republic of Korea's Mission to ASEAN

Ambassador of the Republic of Korea to ASEAN, H.E. Kwon Hee-seog delivered his opening remarks emphasising the significance of international cooperation and swift measures in the fight to end MPD. In his speech, Ambassador Kwon stated, 'Without significant action, there may be more plastic than fish in the ocean, by weight, by 2050' quoting the 2016 report by the Ellen MacArther Foundation. A United Nations Environment Programme (UNEP) 2021 study found that marine plastic pollution makes up around 60%-80% of the trash found in the ocean today. That figure is ten times higher compared to 1980, therefore, global intervention failures could result in 100-250 million tonnes of plastic spilling into the ocean by 2025.

COVID-19 has triggered a drastic uptick in single-use plastics (SUP) as the global health crisis changed lifestyles across the world. This reality, however, could drive the world into 'a very dangerous future even more rapidly.' 'What we urgently need at this critical juncture is more coherent and streamlined policies which can integrate the existing efforts at the national, regional, and global levels while taking into account the full lifecycle of plastics,' Ambassador Kwon emphasised. The Korean government has worked with ASEAN Member States (AMS) by providing clean-up vessels to Indonesia and the Philippines as well as conducting projects to enhance the capacity of coastal and riverside villages. Ambassador Kwon believes more could be done when various stakeholders – governments, industries, businesses, academia, NGOs, and civil societies – come together.

Congratulatory Remarks

1. H.E. Ekkaphab Phanthavong, Deputy Secretary-General of ASEAN — *ASEAN Socio-Cultural Community (ASCC)*

Deputy Secretary-General (DSG) of ASEAN for ASEAN Sociocultural Community, H.E. Ekkaphab Phanthavong conveyed his Congratulatory Remarks via a video message in which he detailed regional initiatives to address plastic trash. The ASEAN Regional Action Plan for Combating Marine Debris in the AMS 2021 – 2025 is a cornerstone of the organisation's objective to end marine plastic pollution. DSG Phanthavong asserted that Southeast Asia must align with global efforts such as UNEA-5.2 and praised the online forum for contributing to ASEAN's efforts to ensure a plastic-free ocean. 'I believe the forum will also contribute to the ASEAN Community Vision 2025,' he stated. DSG Phanthavong stipulated that the ASEAN Secretariat (ASEC) will continue to collaborate with AMS and its partners, including the Republic of Korea, 'to translate plans and policies into actions to create healthier oceans.'

2. H.E. Ambassador Nguyen Hai Bang, Permanent Representative — *Socialist Republic of Viet Nam to ASEAN*

Permanent Representative of the Socialist Republic of Viet Nam to ASEAN, H.E. Nguyen Hai Bang called for sound policies and effective solutions since MPD has evolved into such an urgent matter ‘particularly in our region of Southeast Asia.’ Ambassador Nguyen thanked the Republic of Korea as an ‘an avid supporter of ASEAN in tackling environmental challenges’ and for ‘supporting ASEAN’s efforts to combat plastic pollution.’ Combating plastic pollution and reducing marine plastic debris are some of the major activities stipulated in the ASEAN-ROK Plan of Action 2021-2025. Permanent Representative Bang concluded his remarks by calling for ‘concrete ways and means’ to advance endeavours for a plastic-waste-free ocean and environment.

Panel Discussion

Moderator: Michikazu Kojima, Senior Advisor on Environmental Issues — ERIA

Facilitator: Tiat Jin (TJ) Ooi, Lead Consultant — ERIA E-S-I Knowledge Lab

The event featured two panel discussions with academics, representatives of the public and private sectors, governments, and members of international organisations. The discussions detailed the extent of Southeast Asia's plastic plight, existing and potential solutions in addition to opportunities for increased cooperation with the Republic of Korea. The first session topic was 'Stocktaking of Regional Efforts on MPD' and the second session was on 'Ways to Strengthen Regional and International Cooperation on MPD.' Mr Michikazu Kojima, Senior Advisor, ERIA was the moderator of the Question and Answer (Q&A) session and gave the Closing Remarks.

Session 1 (09:15 - 10:00)

Stocktaking of regional efforts on marine plastic debris

1. Impacts of plastics on marine ecosystem

Dr. Suchana Apple Chavanich, Professor, Dept. of Marine Science —
Chulalongkorn University

Dr Suchana Apple Chavanich, Professor, Department of Marine Science, Chulalongkorn University, Thailand kicked off the first round of panel discussions with her presentation concerning the impact of plastics on marine ecosystems. Dr Chavanich shed light on the severity of Southeast Asia's plastic problem revealing that AMS are among the top 10 countries with a high amount of marine plastic litter and thus are categorised as 'the plastic gang.' Furthermore, over 27% of global plastic waste were imported into Southeast Asia, and altogether, more than 1 million marine animals die every year due to the plastics found in the oceans.

The global pandemic in 2020 posed massive obstacles in the curbing of SUP, and data from Thailand after its third COVID-19 wave revealed shocking statistics. Dr Chavanich shared that Thailand experienced a 15% increase in plastic trash and an additional 6,300 tonnes of garbage daily comprising nearly 2 million facemasks. These upticks were driven by the food delivery business which incurred a 200% growth and generated a minimum of seven plastic-based items per food order. Dr Chavanich disclosed that microplastics have been found in the human blood systems and that each individual has approximately 10,000 microplastics in their stomach, spotlighting the expanding dangers of marine plastic pollution to humans and the environment.

To confront the troubling reality of marine plastic pollution, Dr Chavanich called for individual changes as 'it is now time to change our behaviour, our mindset, and to worry and care about the environment equally as we care about ourselves.' She also encouraged all countries and stakeholders to partner together considering that plastic waste has no boundaries hence making it possible for us to 'leave a better planet for our future generation.'

2. ASEAN Regional Action Plan 2021-2025

Dr. Vong Sok, Head of Environment Division and Assistant Director of Sustainable Development Directorate – *ASEAN Secretariat*

Dr Vong Sok, Head of Environment Division and Assistant Director of Sustainable Development Directorate, ASEC gave insights into the ASEAN Regional Action Plan 2021 – 2025 during his presentation. Dr Sok noted that ASEAN has had longstanding cooperation on the environment and the matter is an integral priority in the ASEAN Socio-Cultural Community Blueprint 2025. The characteristics and elements of this Blueprint related to the environment consist explicitly of four key areas: (1) Conservation and sustainable management of biodiversity and natural resources, (2) Environmentally sustainable cities, (3) Sustainable climate, and (4) Sustainable consumption and production.

To advance the action plan, ASEAN has outlined three phases – (1) Planning, (2) Implementation, and (3) Monitoring, Reporting, and Evaluation – to ensure it achieves its target. In essence, ASEAN strives to reduce inputs into the system through applying best practices and guidelines, enhancing collection and minimising leakages, and embracing waste as part of the plastic lifecycle. Dr Sok explained that collaboration among partners and stakeholders is essential for Southeast Asia to move forward because of the multifaceted effects it has on various sectors and stakeholders. Dr Sok further added how AMS need to align its actions with its international commitments in addition to realise coherent and effective regional policy frameworks and mechanisms.

3. ASEAN-ROK cooperation on marine plastic issues

Mr. Joo-Young Park, *Korea Marine Environment—Management Corporation (KOEM)*

Mr Joo-Young Park, Korea Marine Environment Management Corporation covered the topic of ASEAN and the Republic of Korea's previous collaborative work on marine plastic. From 2019–2021, the Republic of Korea carried out a programme aimed at strengthening and improving the marine debris response in Indonesia, specifically in Labuan Bajo. The \$500,000 initiative encompassed capacity-building workshops and a pilot marine debris monitoring scheme with the ultimate objective to establish a guideline for the monitoring method to be effectively implemented in Indonesia. In 2019, plastic items accounted for 86% of the marine trash found in Labuan Bajo dominated by plastic bottles and bottle caps as well as thin plastic film. As such, Mr Park suggests that policies target the two items and continue upholding monitoring mechanisms because it is the details that will make a difference.

Following the completion of the Labuan Bajo project, the Republic of Korea's government sought other projects to further enhance regional cooperation on MPD in Southeast Asia. A five-year project called 'Enhancement of Marine Debris Management in Manila Bay' in the Philippines is currently under development and Mr Park explained that the \$7.7 million initiative seeks to accomplish the same objectives as that of the Labuan Bajo programme focusing on capacity building on monitoring marine debris and provision of clean-up vessel. A crucial goal of the endeavour is 'to build a ship that could collect marine debris in the ocean' which will then be provided to the government of the Philippines.

Session 2 (10:00 - 11:00)

Ways to strengthen regional and international cooperation on marine plastic debris

1. Life Cycle Approach to marine plastic debris

Dr. Mushtaq Ahmed Memon, Regional Coordinator for Resource Efficiency — *United Nations Environment Programme (UNEP)*

Dr Mushtaq Ahmed Memon, Regional Coordinator for Resource Efficiency, UNEP spoke about the UNEA-5.2 and how AMS can utilise the global instrument to develop new solutions. He shared, 'My focus is really on how ASEAN can really work together for this new resolution to come up with a new global instrument to manage plastic pollution including in the marine environment.' Dr Memon explained that part of the UNEA-5.2 Resolution is aimed at creating an intergovernmental negotiating committee in which AMS have shown strong interest and eagerness to participate in. There are five ways for ASEAN to participate in the implementation of UNEA-5.2:

- (1) Build a broad instrument
- (2) Be informed by science
- (3) Establish close engagement and involvement of stakeholders
- (4) Spur solutions for a new economy
- (5) Learn from other multilateral agreements and instruments while remaining ready and open to embracing bold innovations in the multilateral environmental setting

Proper implementation of the UNEA-5.2 resolution requires an understanding of the entire plastics value chain as it helps identify the major stakeholders and the causes of marine plastic pollution. Dr Memon stresses the need to closely engage and involve stakeholders to secure a smooth adoption of a legally binding international treaty. Dr Memon additionally explained how youths can play a particularly significant role within the plastics value chain as the younger generation can bolster innovation and play a leading role in startups. This is in line with the need to spur a new economy to improve the quality and productivity of plastic production while also funnelling plastic waste back to the economy to avoid leakages. To prevent the upcoming international treaty from offering duplicate solutions on plastic pollution, assessing existing multilateral agreements such as the Basel Convention is necessary in that any new recommendation should be complementary to current ones, Dr Memon suggested.

2. Policies on single-use-plastics restrictions

Dr. Youna Lyons, Dr. Yulu Liu & Ms. Cheng Ling Lim, Researchers at Ocean Law and Policy Programme, Centre for International Law (CIL) — *National University of Singapore*

Dr Youna Lyons, Dr Yulu Liu and Ms Cheng Ling Lim, Researchers at the Ocean Law and Policy Programme, Centre for International Law, National University of Singapore shared their findings regarding policies on SUP restrictions in Southeast Asia; Dr Yulu and Ms Lim presented on behalf of the team.

Dr Liu and Ms Lim define SUP as products encompassing ‘food packaging, plastic bottles, plastic bags, and microbeads found in cosmetic products, and other one-time usage items.’ Based on findings from the Regional Research Inventory 2.0, food packaging is listed among the top 10 reported sources of marine plastic litter while plastic bags, food packaging, and plastic bottles make up the dominant SUP items in ASEAN. The COVID-19 pandemic became an additional burden as the global health crisis triggered massive demand for SUP for medical use. More recently, Dr Liu and Ms Lim’s research indicated microplastics as the latest concern that is drawing assiduous attention among policymakers and scientists.

Initial assessment of the policy effectiveness of SUP bans in ASEAN+3 reveals that existing mandates are targeting plastic products for specific applications within certain limited geographic areas. Dr Liu and Ms Lim also found that the compliance, monitoring, and enforcement of these SUP bans in the region remain weak, therefore, offering room for improvement. While most plastic mandates target the consumer, the researchers believe that activities involving the aquaculture, tourism, and manufacturing sectors also need to be added to the target. Moreover, there is a shortage of information on economic incentives and return schemes coupled with funding shortages to support research on new interventions and effectiveness evaluations.

On the UNEA-5.2, Dr Liu and Ms Lim find the new treaty’s regulations, definitions, and guidance on upstream processes to be of relevance to AMS, stipulating that ‘regional best practices in SUP could also contribute to the discussions at the international level.’ Country perspectives and national interests will have to be considered during the negotiation process of the global treaty.

3. Application of EPR system in ASEAN

Mr. Edwin Seah, Advisor, Board of Advisors — *TRIA Pte Ltd*

Mr Edwin Seah, Advisor, Board of Advisors, TRIA Pte Ltd summarised crucial points for the successful application of the extended producer responsibility (EPR) system in ASEAN. Mr Seah pointed out that while some AMS have included EPR as part of their policies or national regulations as early as 2008, EPR is still not a common lever used to tackle waste given several challenges in their execution. Mr Seah suggests a rethink of EPR and how it can be implemented is required given that the EPR model as applied in the US and Europe may not be fit for purpose for Southeast Asian countries. This is because unlike the US or the European Union, many of the developing countries in ASEAN suffer from poor monitoring, low compliance, and weak enforcement of EPR combined with poor waste collection and waste management infrastructure, and high dependence on informal waste collectors. These factors would make it difficult to apply an EPR system ‘or to see it being effectively run’ in the ASEAN region. Given this current state of affairs, Southeast Asia will require, at least, five years before EPR can be executed effectively in the same manner as it is done in the West.

Mr Seah asserted that governments should play a bigger role in adopting EPR and managing marine litter by implementing proper waste management systems and developing or upgrading waste infrastructure, and stop the inflow of new plastics upstream while clearing up wastes downstream. Moreover, 'the time has come to move away from guidelines, best practices, and voluntary actions to a more mandated approach in terms of dealing with MPD.' With ASEAN's population expected to explode to 750 million people by 2030, Mr Seah warned of an impending health & environmental disaster in the coming years if action is not taken now to stem the flow of post-consumer waste and marine litter.

4. Good Practices on plastic waste management

Prof. Yong-Chul Jang, Vice President and International Chair of Korea Society of Waste Management — *Chungnam National University*

Prof Yong-Chul Jang, Vice President and International Chair of Korea Society of Waste Management, Chungnam National University offered his take on good practices to facilitate sustainable plastic waste management and encourage cooperation between the Republic of Korea and ASEAN. On marine plastic pollution, Prof Jang shared that in 2021, 81% of global plastic waste originated from ASEAN and the top 10 rivers which contribute to the pollution were in Southeast Asia hence 'there is an urgent need for solving this plastic pollution in ASEAN.' Prof Jang noted how plastic pollution comes down to waste and mismanagement with multifaceted effects on the climate, diverse sectors, and the economy. 'Many diverse sectors are impacted by the mismanagement of plastic waste,' he mentioned. ASEAN's plastic pollution can be traced back to its heavy reliance on linear production where mass consumption leads to mass production and ends up in mass disposal. Nevertheless, Prof Jang noted that the management of increasing waste and the establishment of a plastic circular economy is an issue that Europe, the US, and the Republic of Korea also continue to struggle with.

Concrete solutions encompassing the development of a plastic circular economy are thus integral to solving Southeast Asia's increasing volume of waste. To realise such an economy, a robust regulatory environment is vital, and economic incentives, sound policy design, and a legal framework are essential. Exploring alternative ways to recycle plastics is also important because fossil-fuel-based plastic products will remain in the next decade or longer. Prof Jang recommends eco-design, chemical recycling, and bioplastics as possible solutions. Furthermore, public awareness and creating supply chains at the local level are necessary to bring together many stakeholders and spur much-needed progress. Expressing similar views as other speakers, Prof Jang emphasized that international cooperation along with education, public awareness, and outreach are essential to solving marine plastic pollution. He expressed his organisation's readiness to share two decades' worth of experience and knowledge with AMS to solve marine plastic pollution.

<Discussion>

Q1. What other sectors are known to be major sources of plastic pollution and how can they contribute to the reduction of plastic products?

Dr Liu explained that the tourism sector has been affected by the negative effects of MPD as tourists were reluctant in visiting places where excess waste is found in its oceans. Few publications have shown engagement with or discussions in the tourism sector to reduce SUP even though it could result in economic losses.

The United Nations Food and Agriculture Organisation has begun promoting more attention and regulations dedicated to the agriculture and aquaculture sectors to address plastic films used to cover plants. Even though plastic films make up a large amount of SUP used for agriculture, there are no existing regional or global regulations which offer guidance on this matter. This is one of the current weaknesses in plastic reduction at the international level and in some regions.

Q2. How can international legal agreements and policies be implemented at the local or national levels?

Dr Memon suggested the United Nations Sustainable Development Goals as a reference since it is a form of an international agreement that has reached the national level. International cooperation has been at the heart of this success. Stakeholder engagement is also crucial because international agreements typically involve the private sector, civil society, and academia as key players.

When it comes to stakeholders, we have to acknowledge that they can be part of the solution and problem hence the emphasis should be on identifying their roles and how they can support the solution. Nationally Determined Contribution (NDC) adopted in the climate change sector is another example which can be studied to understand how international policies can be integrated at the national or local levels.

Q3. What are your policy recommendations on a global, regional, or national level to solve marine plastic pollution?

Dr Chavanich emphasised the importance of scientific data and social context in developing policies on plastic waste management. A large number of data is still required to formulate effective and practical strategies. Measures such as monitoring and evaluating the consequences of plastic litter on the marine ecosystem, animals, and humans are crucial as well. Furthermore, individuals must change their mindset and behaviour. Policymakers must consider the cultural and behavioural differences among nations and societal groups during the policy formulation process.

Mr Park also advised governments to compile data and information on marine litter as it is an important part of developing a national plan. The Republic of Korea had compiled scientific data for over a decade by consistently monitoring the activities on the ground before it established its national plan. This has further allowed the Republic of Korea to change its national plan on MPD every four years to adjust to emerging problems.

Mr Seah provided seven recommendations:

- (1) Form a central coordinating body
- (2) Identify the gaps, channel funding, and expertise of each AMS
- (3) Consider a tiered EPR which acknowledges the different capabilities and challenges of larger or urban cities versus smaller or rural cities
- (4) Directly address the problem of plastics through immediate restrictive measures
- (5) Consider a blanket tax on the production of virgin plastics across ASEAN
- (6) Move toward more legal and mandated actions instead of voluntary efforts
- (7) Determine NDC for tackling MPD by the end of 2022

Prof Jang suggested chemical recycling as a solution in that fossil-fuel plastics are expected to remain a mainstay for an indefinite period. For example, bioplastics from biodegradable bio-based plastic are believed to have the capacity to replace non-biodegradable fossil-fuel-based plastics in the next 20 years. Bioplastics made of biodegradable fossil-fuel-based plastics are possible short-term solutions. More education on and higher awareness of this possible solution is required in the long run to remove the technical, social, and economic barriers in the production of bioplastics. Lastly, Prof Jang demands restrictions on SUP production be put in place to realise sustainable waste management systems.

Q4. What are some suggestions to improve the application of EPR systems in Southeast Asia?

Dr Memon emphasised that governments need to take into account their respective domestic circumstances and economic models when they adopt EPR. An EPR system in one country cannot be replicated in another due to differences in needs and circumstances. We also need to be open to other solutions.

Mr Seah concurred with Dr Memon's country- or region-based approach. 'The key step is to ensure that the building blocks are in place' so that AMS can understand the current status of their waste management infrastructure and reduce their excessive dependence on the informal sector and empower the formal sector in waste collection,' he added. Robust regulations, mandates, fiscal measures, and legally binding international agreements will be helpful to drive some of the MPD solutions forward in ASEAN.

Q5. Waste management in rural areas across ASEAN is weak. Based on your experience, what can the region do to improve their management capabilities?

Prof Jang highlighted that capacity-building and knowledge transfer from countries with experience and expertise in the field including the Republic of Korea and Japan can benefit low- or lower-middle-income countries in Southeast Asia. Prof Jang added that setting up a demonstration project for an EPR system could be beneficial especially when you take into account the different policies, cultures, and behaviours of each country. Recognising the delayed effects of marine litter management is an important initial step in enforcing rapid clean-up and minimising leakages. Due to the limited resources and infrastructures to handle the enormous amount of plastic waste in ASEAN, massive financial support will be needed. Otherwise, the region could potentially create more hurdles.

Q6. What are the differences between SUP mandates in developed or developing countries?

The research completed by Dr Liu and Ms Lim did not encompass a comparative study between developed and developing countries. In fact, even some developed countries are imposing area-specific or item-specific SUP bans. In the case studies about the US and Australia, it turned out that certain states are imposing a SUP ban on selected products while others are enforcing a different mandate or have no regulation. Dr Liu clarified that ‘for developing states, we have to grant more time and capacity-building opportunities’ so that they can carry out more activities or programmes to target plastic pollution from SUP on their own.

Closing Remarks

Mr Kojima of ERIA expressed his gratitude to the Forum’s speakers and participants for the lively discussions on a fundamental topic of concern in the ASEAN+3 region. ‘We know that we have a lot of challenges to reduce plastic pollution and to save our environment,’ he stated. In keeping with the comments made by the distinguished presenters, Mr Kojima asserted that the integral function of international cooperation and collaboration offers the chance to reduce MPD and plastic waste altogether. He concluded his speech by praising the relevance of the online forum amidst negotiations for the UNEA-5.2 agreement and conveyed his optimism about the treaty’s future success in combating global plastic pollution.

[Click here to relive the event.](#)

Policy Recommendations*

**Policy recommendations expressed in this forum are those of the speakers and do not reflect the views or positions of the Government of the Republic of Korea or ERIA.*

Issue	<u>Stronger Multi-Sectoral Collaboration</u>
Recommendation	Encourage and pursue collaborations on an international, national, and local level between governments, academia, industries, civil societies, and NGOs.
Rationale	<p>Plastic pollution and marine debris affect multiple sectors, humans, the environment, and animals at every level at all corners of the globe. The upstream and downstream processes of plastics necessitate an all-hands-on-deck approach as consumers, producers, societies, and states are simultaneously part of the lifecycle.</p> <p>AMS are at different levels of maturity in managing solid waste, making knowledge sharing and capacity-building central to equipping each nation with the tools and resources to end the plastic contamination of the ocean. In addition, ASEAN has partners that are committed to supporting environmental collaborative initiatives and have offered support as well as expertise to abate the region's plastic plight. A diverse network of stakeholders could speed up the development of basic infrastructures while at the same time safeguarding the swift execution of innovative solutions.</p>
Issue	<u>Lack of National and Regional Environmental Coordination</u>
Recommendation	Establish a coordinating body or task force designed to identify obstacles, channel support, and uphold enforced laws and initiatives on a national and regional scale.
Rationale	Although there has been a wide range of environmental initiatives undertaken by various groups happening simultaneously, the results do not always add up. Essentially, ensuring that the ocean is free of trash involves multiple parties and a multitude of programmes. A coordinated central structure can facilitate identifying integral gaps in each country and then properly channel funding, assistance, and the necessary expertise required to achieve the main targets. A central task force can also support the adoption of international agreement objectives at the national and local levels throughout the UNEA-5.2 negotiations.

Issue	<u>Envisioning a Plastic Circular Economy</u>
Recommendation	Institute a regulatory framework covering the legal, economic, and technical aspects including economic incentives.
Rationale	Inconsistent plastic ban rules, funding shortages, and lack of information on return schemes and other economic incentives across AMS suggest areas of improvement before the fruition of a circular economy for plastic. A sound and flexible policy design pave the way for a strong regulatory framework covering vital areas to support and realise a plastic circular economy in the region. Aspects that can be included are research and development, design for recycling, green procurement, industrial standards for recycled products, incentives, fiscal measures, and a legal framework.
Issue	<u>Improve Data Collection of Regional Marine Debris</u>
Recommendation	Enhance monitoring systems and involve local communities in the data collection process.
Rationale	Developing effective national and regional policies to combat marine litter requires solid data and information which can be realised through adequate enforcement of monitoring mechanisms. Marine plastic pollution is an evolving phenomenon. By adapting to the latest trends and scientific research, AMS can constructively tailor its action plan on MPD to systematically respond to each source of pollutant while preventing the spread of its negative effects on humans, marine animals, and the ecosystem. Capacity development of monitoring should be conducted.
Issue	<u>Impose a Blanket Tax on SUP Items and Limitations on New Plastics</u>
Recommendation	Apply a blanket tax for SUP products across all AMS to discourage manufacturers to shift to a 'cheaper' country. Directly target the source of new plastic production through highly restrictive measures.
Rationale	ASEAN does not have a uniform or streamlined regulatory framework to limit the use of SUP on a regional, national or local level as it is often geographically centric and only targets certain items. A blanket tax on SUP products can help increase the price of cheap virgin plastics and put it on par with sustainable alternatives. This would make sustainable goods affordable to small-scale companies. A blanket tax scheme would dissuade plastic manufacturers from shifting to other ASEAN countries in their bid to find cost-effective production locations.

AMS have insufficient waste management infrastructures and face a worsening waste outlook stemming from the COVID-19 pandemic and previous imported plastic waste. Considering the lack of proper infrastructures in place and an impending population boom of 750 million people by 2030, ASEAN's litter circumstances are only expected to multiply without swift, effective resolutions. A ban or moratorium on new virgin fossil fuel-based plastics for a certain period of time will provide AMS with some time to clear up old and existing plastic scraps.

Issue	Impose Uniform and Comprehensive SUP Mandates
Recommendation	SUP bans should target many other sectors of activities, encompass more SUP products, and should not be limited to certain geographic areas.
Rationale	Currently, SUP mandates across AMS are limited to specific areas and economic sectors and do not apply to a wide variety of SUP items. These realities weaken the regulatory enforcement, therefore, widening the potential of MPD leakages.

AMS should recognise the diverse economic sectors that use SUP products including tourism, agriculture, manufacturing, and construction, and then impose bans to limit a wide range of items, particularly thin plastic films used in agriculture and aquaculture. The tourism industry stands to face economic losses should the state of Southeast Asia's marine ecosystem degrades in the future as it could dissuade travellers from visiting the tourist attractions in the region.

Issue	Rethink EPR System Application
Recommendation	An effective EPR system should take into account the local circumstances. A tiered EPR can cater to this approach. Begin diverging from the belief that EPR systems can be replicated from country to country.
Rationale	Implementation of an EPR system in ASEAN is typically based on the systems from the EU and US making it unrepresentative of the Southeast Asian picture. The region suffers from poor monitoring, low compliance, weak enforcement, insufficient waste collection, and a high dependence on informal waste collectors. These factors show the differences compared to the European and American models and as such, the replication of their systems could well lead to ineffective adoption of an EPR system in ASEAN. Adjusting systems according to the local condition and communities may have a significant difference in waste management control.

Issue	<u>Explore Bold Solutions to Tackle Unrecyclable Plastics</u>
Recommendation	Chemical recycling and bioplastics are alternative solutions to manage fossil-fuel-based plastics that are expected to remain in use for several decades.
Rationale	<p>Plastics produced with fossil fuels are likely to remain a mainstay for an indefinite period of time. ASEAN leaders must remain open-minded to new emerging ideas. Chemical recycling is a mechanism which promotes circular plastic production by transforming unrecyclable plastics into new plastic products.</p> <p>Bioplastics from biodegradable bio-based plastic are believed to have the capacity to replace non-biodegradable fossil-fuel-based plastics in the next 20 years. Meanwhile, bioplastics made of biodegradable fossil-fuel-based plastics are short-term solutions.</p> <p>At present, several technical, social, and economic barriers combined with a lack of public awareness muddle the potential of sustainable plastic alternatives. Early knowledge of its function could improve the existing climate for this eco-friendly innovation as it is crucial for the future.</p>
Issue	<u>Promote Capacity-Building and Knowledge Transfer to Facilitate Robust Waste Management Ecosystems</u>
Recommendation	Partner with countries that have experience and expertise in resolving MPD to solve the challenges of regional waste management, especially in rural areas.
Rationale	<p>Waste management in rural areas of ASEAN are inadequate, and it will take some time for the region to create a sufficient ecosystem to manage mass waste. Partnering with countries that have the expertise and insights in tackling waste problems, such as the Republic of Korea and Japan, can facilitate capacity building and knowledge transfer. This can be particularly beneficial for low- to lower-middle-income countries in Southeast Asia. Such initiatives are integral for AMS to effectively and self-sufficiently conduct future programmes and methods concerning waste and MDP.</p> <p>AMS also have different policies, cultures, and behaviours concerning waste which slows down the creation of adequate regional waste management ecosystems. In this sense, a demonstration project could help strengthen the foundation of robust waste management systems in Southeast Asia.</p>

Appendix – panellists’ presentation material

1. **Impacts of plastics on marine ecosystem**
Dr. Suchana Apple Chavanich, Professor, Dept. of Marine Science —
Chulalongkorn University
2. **ASEAN Regional Action Plan 2021-2025**
Dr. Vong Sok, Head of Environment Division and Assistant Director of Sustainable
Development Directorate — *ASEAN Secretariat*
3. **ASEAN-ROK cooperation on marine plastic issues**
Mr. Joo-Young Park, *Korea Marine Environment –Management Corporation (KOEM)*
4. **Life Cycle Approach to marine plastic debris**
Dr. Mushtaq Ahmed Memon, Regional Coordinator for Resource Efficiency —
United Nations Environment Programme (UNEP)
5. **Policies on single-use-plastics restrictions**
Dr. Youna Lyons, Dr. Yulu Liu & Ms. Cheng Ling Lim, Researchers at Ocean Law and
Policy Programme, Centre for International Law (CIL) — *National University of
Singapore*
6. **Application of EPR system in ASEAN**
Mr. Edwin Seah, Advisor, Board of Advisors — *TRIA Pte Ltd*
7. **Good Practices on plastic waste management**
Prof. Yong-Chul Jang, Vice President and International Chair of Korea Society of
Waste Management — *Chungnam National University*

Impact of plastics on marine ecosystems

Suchana Apple Chavanich

**Department of Marine Science, Faculty of Science
and
Aquatic Resources Research Institute
Chulalongkorn University
Thailand**

What era are we at ?



THE PLASTIC GANG

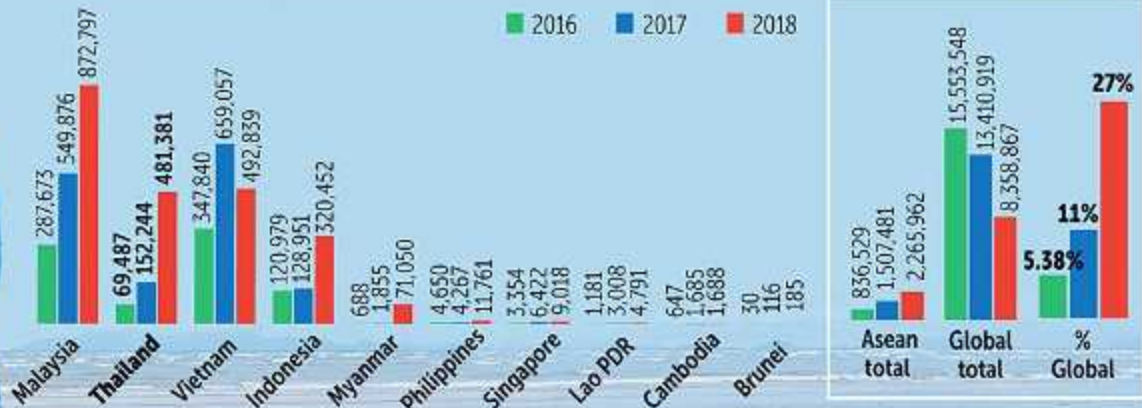
Biggest sources of plastic polluters as of 2017



Unit: million tonnes per year

Plastic waste import in Asean countries between 2016-2018

Unit: tonnes



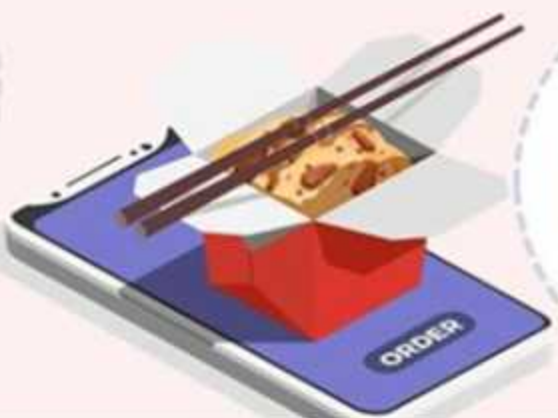








Work From Home





WASTE DURING THE COVID-19 THIRD WAVE

15%

MORE PLASTIC WASTE



**6,300
TONNES**

OF GARBAGE CREATED DAILY, INCLUDING
UP TO 2 MILLION FACEMASKS



**200%
GROWTH**

IN FOOD DELIVERY BUSINESS



**PLASTIC
WASTE**

GENERATED FROM FOOD DELIVERY
RISES TO 550 MILLION PIECES YEARLY



**EACH FOOD ORDER
PRODUCES AT LEAST 7 ITEMS
OF PLASTIC WASTE**



**PLASTIC
WASTE**

IN BANGKOK RISES BY 60%, ONLY 19% CAN BE RECYCLED

Impact of Particulate Plastics

```
graph TD; A[Impact of Particulate Plastics] --> B[Physical Effects]; A --> C[Biological Effects];
```

Physical Effects

- Physical obstruction/entanglement
- Damage of feeding appendages
- Damage of feeding activities
- Damage of digestive tract
- Mobility effects

Biological Effects

- Impaired health
- Heart beat abnormal
- Growth reduction/abnormal
- Delay in reproduction
- Damage to nervous system
- Causing cancers
- Fatal/death

“Right now we ingest the plastic that we throw away, through the seafood we consume, the water we drink and the air that we breathe.”

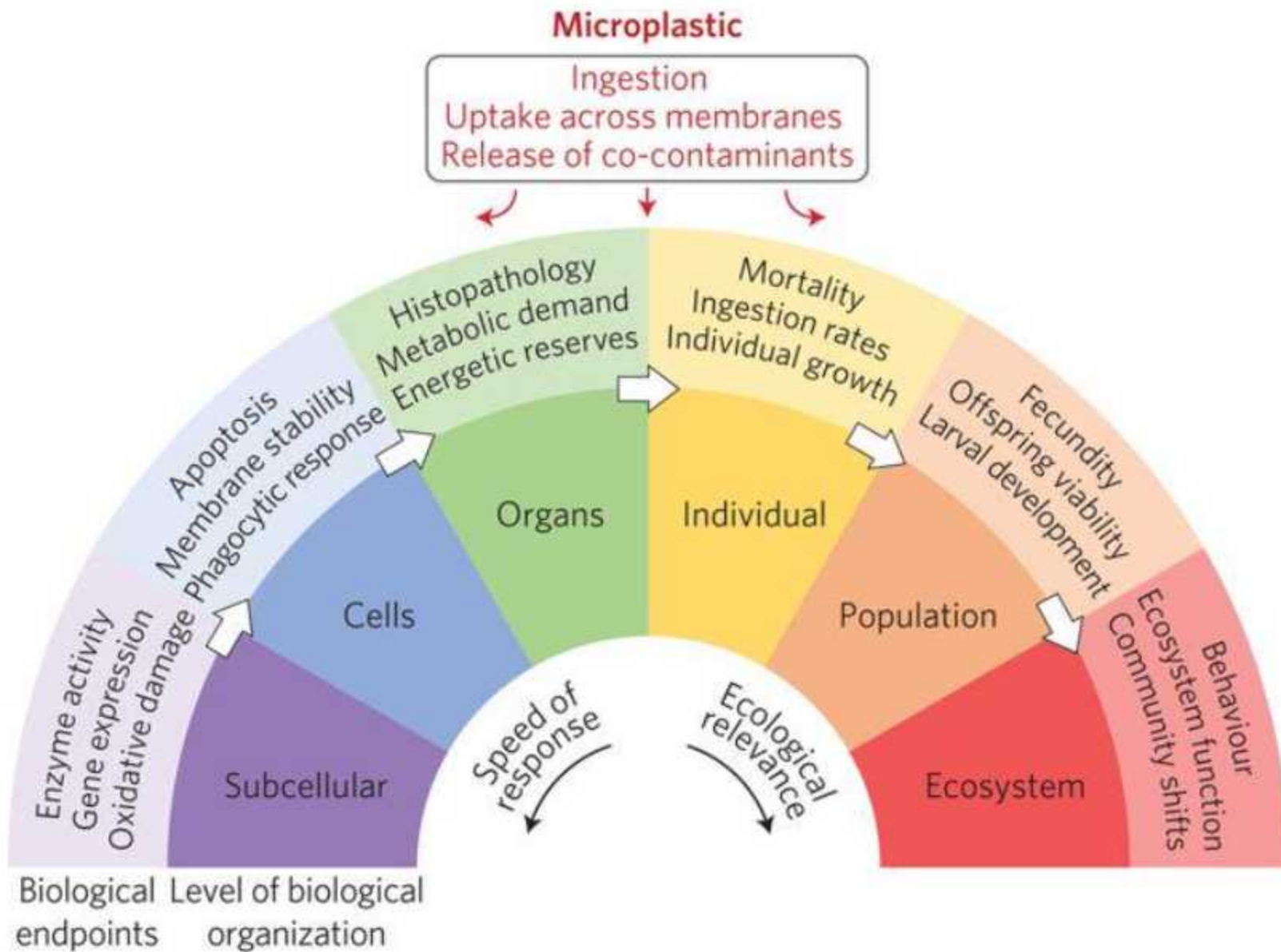
#PlasticInitiative
#PlasticPollution

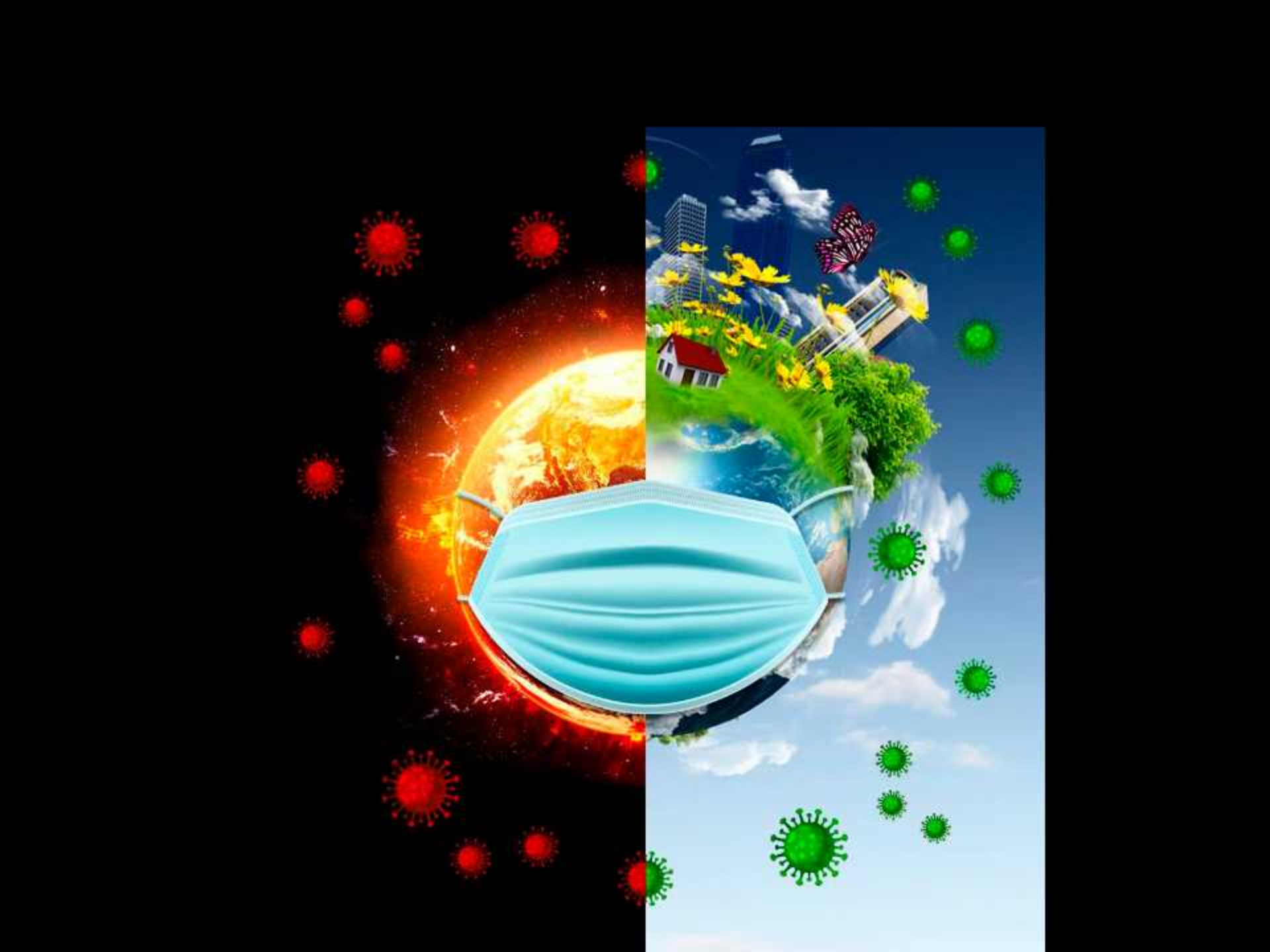


Dr Suchana Chavanich

Associate professor, the Department of Marine Science,
Chulalongkorn University, Thailand

speaking at the Plastic Initiative awareness raising event in Thailand







ASEAN Cooperation on Marine Plastic Debris

ASEAN Secretariat

ROK Mission to ASEAN – RKC-MPD ERIA “The way forward for a stronger regional and international cooperation on Marine Plastic Debris”

23 June 2022



one vision
one identity
one community



Coastline 173.000 km



75% of global coral reefs



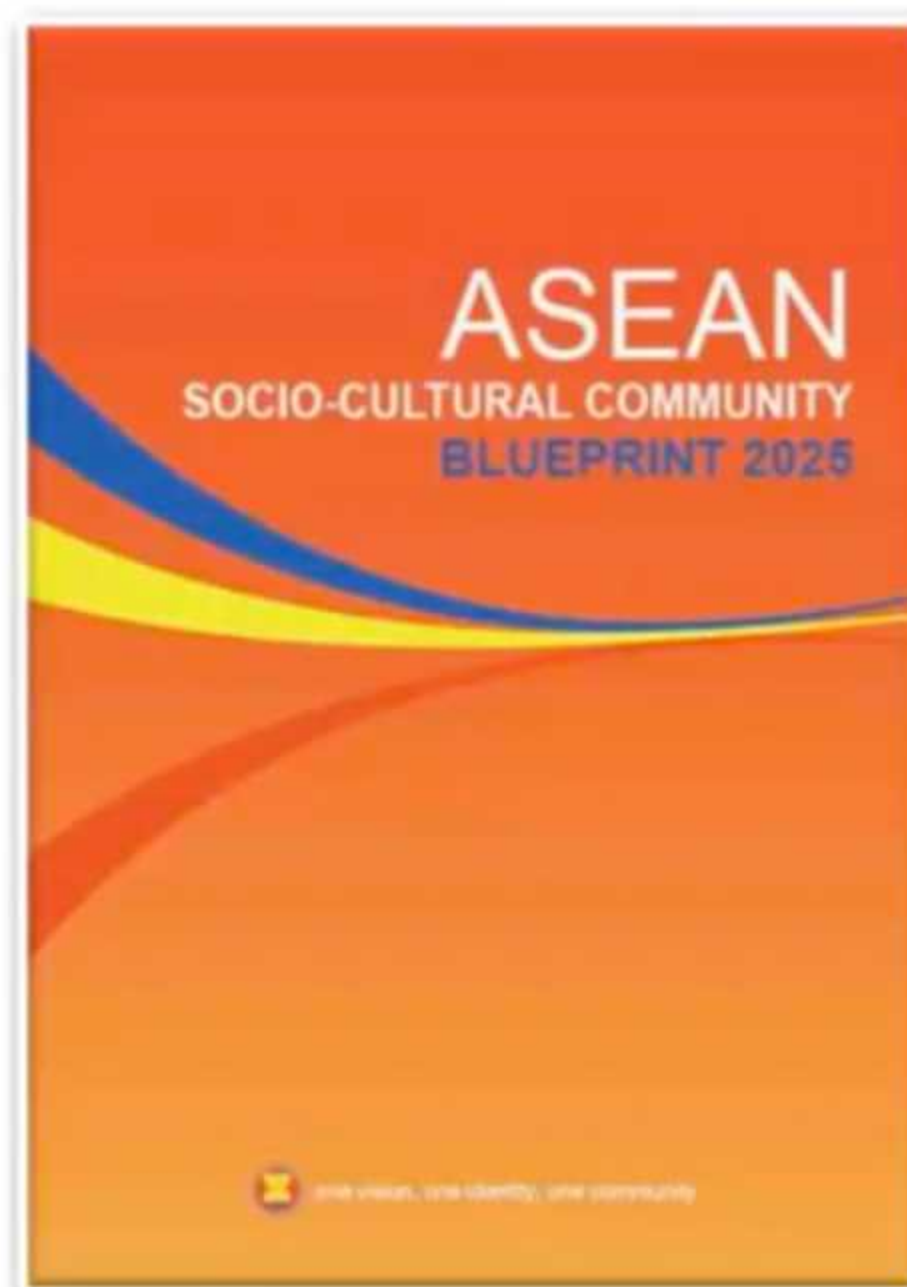
6 of 7 turtle species, 51 of 70 mangrove species, etc.



Total Marine Fishery Production: 16.15 million ton (2013) and 16,66 million tonnes (2014)



KEY RESULT AREAS UNDER 'SUSTAINABLE' IN ASCC BLUEPRINT 2025



Conservation and Sustainable Management of Biodiversity and Natural Resources

01

Environmentally Sustainable Cities

02

Sustainable Climate

03

Sustainable Consumption and Production

04





STRATEGIC PRIORITIES OF ASPEN

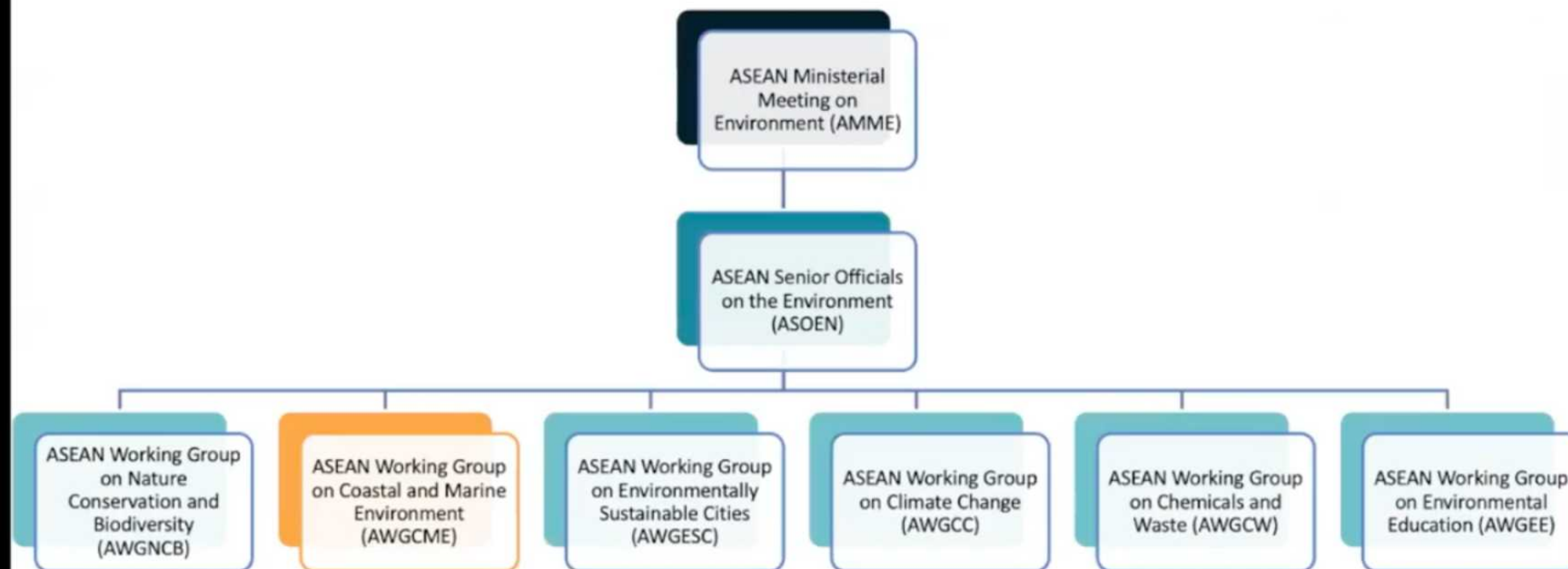
and their linkage with ASCC Blueprint and Global Priorities

ASCC Blueprint	ASPEN Strategic Priority	Global Priorities
C1. Sustainable Management of Natural Resources	Strategic Priority 1: Nature Conservation and Biodiversity	SDG 15 CBD / Aichi Targets
	Strategic Priority 2: Coastal and Marine Environment	SDG 14
	Strategic Priority 3: Water Resources Management	SDG 6
C2. Sustainable Cities	Strategic Priority 4: Environmentally Sustainable Cities	SDG 11 New Urban Agenda
C3. Sustainable Climate	Strategic Priority 5: Climate Change	SDG 13 UNFCCC
C4. Sustainable Consumption and Production	Strategic Priority 6: Chemicals and Waste	SDG 12 BRS Conventions
	Strategic Priority 7: Environmental Education and Sustainable Consumption and Production	SDG 12





Institutional Framework: ASEAN Environmental Cooperation





Interlinkages

Coastal and Marine Environment

- Key Coastal and Marine Area Conservation
- Endangered Coastal and Marine Species Conservation
- Tanker Desludging and Oil Spill Reduction
- **Coastal and Marine Pollution Mitigation**
- Coastal and Marine Invasive Alien Species
- Climate Change Issues and Impacts on Coastal Areas
- Integrated Coastal Management and Marine Spatial Planning

Sustainable Cities

- **Sustainable Urban Planning, Development and Implementation**
- Climate Resilient and Low Carbon Cities

Chemical and Waste

- Hazardous Waste Management
- Transboundary Movement of Hazardous Chemicals and Waste
- Sound Chemical Management
- **Environmentally Sound Technologies toward Green Industries**
- ASEAN Presence in Global Community
- Chemicals and Hazardous Waste Accident Prevention



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Special Ministerial Meeting
on Marine Debris and
Regional Action Plan on
Combating Marine Debris
(Thailand)

EU Support to ASEAN on
Circular Economy

Reduce, Reuse, Recycle to
Protect Marine Environment
and Coral Reefs

ASEAN-Norwegian
cooperation project on local
capacity building for
reducing plastic pollution in
the ASEAN region (ASEANO)

EAS/ASEAN+3 Cooperation
on addressing Marine
Debris

Addressing Marine Debris

Collaborating/Supporting Partners:



PEMSEA

and others.....





Special ASEAN Ministerial Meeting on Marine Debris (SAMM-MD) 5 March 2019, Bangkok, Thailand



SAMM-MD was a follow-up to the Phuket Conference on Reducing Marine Debris in ASEAN Region in 2017.

Outcome documents
of
SAMM-MD

Bangkok Declaration on
Combating Marine Debris in
ASEAN Region

<https://asean.org/bangkok-declaration-combating-marine-debris-asean-region/>

ASEAN Framework of Action on
Marine Debris

<https://asean.org/asean-framework-action-marine-debris/>



ASEAN RAP for Combating Marine Debris

- Officially launched on 28 May 2021
- Consist of 14 actions, in line with 4 components of **ASEAN Framework of Action of Marine Debris**



- Institutional set-up
- Resource mobilisation
- Communication and coordination strategy, and baseline development

- Establishment of task force, advisory group, and monitoring unit

- Annual reporting, mid-term review, and final evaluation



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ASEAN Regional Action Plan for COMBATING MARINE DEBRIS in the ASEAN Member States (2021-2025)



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Reduce Inputs into the System

Reduce inputs into the system by designing products to be reusable or recyclable, improving business and consumer awareness on their waste plastic footprint, clarifying standards on biodegradability and compostability and reducing consumption of single-use plastics.



Enhance Collection and Minimize Leakage

Enhancing collection and minimizing leakage by improving key SWM infrastructure — especially poorly sited dumpsites, promoting sorting and appropriate fee structures, developing stronger enforcement mechanisms to discourage littering and clarifying packaging labels for end of life disposal/recycling.



Create Value for Waste Reuse

Create value for waste reuse by guaranteeing feedstock volumes, developing off take markets, improving consumer segregation of waste, increasing knowledge of suitable technologies and minimising investment risk in key solutions.



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Integration between Elements of the Waste Value Chain and Framework of Action of Marine Debris

	Reducing inputs into the system	Enhancing collection and minimizing leakage	Creating value for waste reuse
Policy Support and Planning	2. Guiding principles for phasing out select single-use plastics 4. Best practice manual for development of minimum standards and technical requirements for plastic packaging and labeling 5. Regional stocktaking of green public procurement	1. Regional guidebook on financial mechanisms for investments in plastic waste management 6. Best practice manual for reducing, collection and treatment of sea-based litter	3. Regional guidebook on standards for responsible plastic waste trade, sorted plastic waste and recycled plastics
Research, Innovation and Capacity Building	8. Strengthen ASEAN regional knowledge network on marine plastics 9. Regional study on microplastics	7. Guidebook for common methodologies for assessment and monitoring of marine litter 10. Coordinate regional training programs on plastics and waste management	
Public Awareness, Education and Outreach	11. Behavioral change communication strategy playbook	12. Enhance regional awareness for consumers of labeling of plastics and packaging	
Private Sector Engagement		13. Establish a regional platform for EPR knowledge support and implementation support	14. Establish a regional platform to support innovation and investments in plastics and plastic waste management



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ASEAN Leader's Declaration on Blue Economy



FINAL

ASEAN LEADERS' DECLARATION ON THE BLUE ECONOMY

WE, the Association of Southeast Asian Nations (ASEAN), namely Brunei Darussalam, the Kingdom of Cambodia, the Republic of Indonesia, the Lao People's Democratic Republic, Malaysia, the Republic of the Union of Myanmar, the Republic of the Philippines, the Republic of Singapore, the Kingdom of Thailand, and the Socialist Republic of Viet Nam, on the occasion of the 38th ASEAN Summit on 26 October 2021,

RECOGNISING the expansive, transformative, long-term, and multidimensional ramifications of the unprecedented Coronavirus Disease 2019 (COVID-19) pandemic throughout the region and the need for ASEAN's collective efforts and holistic response to mitigate the impact of COVID-19 towards achieving a robust, resilient and comprehensive recovery for the peoples of ASEAN;

FURTHER RECOGNISING the challenges presented by the rapidly changing global and regional geo-political and socio-economic landscapes and non-traditional threats as well as other challenges, including climate change and sea-level rise, and the opportunities emerging from advancements in technology and the Fourth Industrial Revolution, as well as the growing interest of other countries and regional and international organisations to engage with ASEAN, through peaceful and constructive dialogue;

ACKNOWLEDGING that the ocean and seas are key drivers of economic growth and innovation, while taking into account the need to ensure ocean sustainability and rules-based ocean governance;

NOTING the emerging significance of the Blue Economy and the different perspectives on the concept;

FURTHER NOTING that the Blue Economy is a multifaceted and cross-cutting concept that involves all three pillars of the ASEAN Community;

EMPHASISING the need for ASEAN to reach a common understanding on the Blue Economy as well as identify the scope of cooperation and activities that ASEAN Member States are comfortable to undertake together, and with external partners;

AGREE to explore cooperation on the Blue Economy in areas such as:

- a) marine environmental protection;
- b) Illegal, Unreported and Unregulated (IUU) fishing;
- c) marine and coastal ecosystems protection;
- d) sustainable aquaculture and fishing practices;
- e) sustainable production and consumption;
- f) biotechnology;
- g) marine industrial development;
- h) marine pollution; marine litter and plastic pollution;
- i) food security; trade; coastal tourism and heritage conservation;
- j) maritime transport; security and safety of navigation; marine
- k) ocean energy;
- l) sea and ocean governance and management;
- m) data, statistics, and data analytics;
- n) capacity-building, digitisation and innovation;



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Way Forward





THANK YOU

Environment Division ASEAN Secretariat | Sisingamangaraja 70 A Jakarta 12110 | (62)21-7262991
<http://environment.asean.org> | EnvironmentDivision@asean.org



2022 The way forward for a stronger regional and international cooperation on Marine Plastic Debris

Collaborative efforts towards zero marine Debris in ASEAN region : ROK-Indonesia Joint capacity building project on Marine Debris

2022. 6. 23.



Juyoung PARK

Marine Debris Management Center /

Korea Marine Environment Management Corporation(KOEM)



A Public Corporation Creating Future Value Of Healthy Ocean
Korea Marine Environment
Management Corporation

■ UNEA5 Resolution 5/14(2022)



**End plastic pollution :
Towards an international
legally binding instrument**

**Open Ended
Working Group(OEWG)
(2022.5.31. – 6.1.)**

**Intergovernmental
Negotiating Committee
(INC)**

**International Legally
Binding Instrument
(2024)**

Recognizing the wide range of approaches, sustainable alternatives and technologies available to address the full life cycle of plastics, further highlighting the need for enhanced international collaboration to facilitate access to technology, capacity-building, and scientific and technical cooperation, and stressing that there is no single approach,

(1) To encourage action by all stakeholders, including the private sector, and to promote cooperation at the local, national, regional and global levels;

Project Outline

Title

- Strengthening and Improvement for Marine Debris Response in Indonesia

Period

- 2019-2021

Financing

- ROK ODA Project / KRW 600 million / Appx. 500,000 USD (2019-2021, 3 years)

Partners

- (ROK) Ministry of Oceans and Fisheries, KOEM. OSEAN
- (ROI) Coordinating Ministry of Maritime Affairs and investment(CMMI)

Location

- Labuan Bajo(Flores Island, West Manggarai, Indonesia)



Satellite snapshot of Labuan Bajo



Marine waste on coast of Labuan Bajo

■ Major Components of the project

Capacity Building Workshop

- » Theory and practice combined training program for Marine Debris policies and marine debris monitoring

Pilot MD Monitoring

- » On-site training & Pilot Marine Debris Monitoring
- » Analysis and Assessment on Marine debris through pilot Marine debris Monitoring

Monitoring Guideline

- » Establishment of MD Monitoring guideline that can be effectively implemented in Indonesia

Introduction of the Project

■ Capacity Building Workshop



- Discussion on international marine debris trend
- Educate method of Marine debris Monitoring
- Introduction to Marine debris Policies in Korea

■ Pilot Marine Debris Monitoring in Labuan Bajo

- On site practice of Marine Debris Monitoring Methodology
- Understanding substances of Marine Debris
(Materials, abundance, etc.)
- Comparing pilot Monitoring stations



■ Target Area of pilot MD Monitoring (2019)

» Coastal Areas of Labuan Bajo : 5 spots

Evaluate the spots considering the length, width, pollution level, accessibility through the field trip



Marine Debris Monitoring Guideline

- Provide marine debris monitoring Guideline with detailed description for choosing target area, rules of procedures to implement monitoring

English

MANUAL FOR BEACH LITTER MONITORING PROGRAM

Bahasa Indo

DAFTAR ISI

1. GAMBARAN KEHUTAN	4
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LAMPYRAN I. TABEL ANDEA ACHE

Mr. Cordova & Ms. Muslin

5. PHOTO GUIDE FOR LITTER CLASSIFICATION

Plastics_hard type

Hard plastics are rigid and usually hold their original shapes. Examples are plastic bottles, lids, lighters, and hard bungs.

6. DATA ANALYSIS

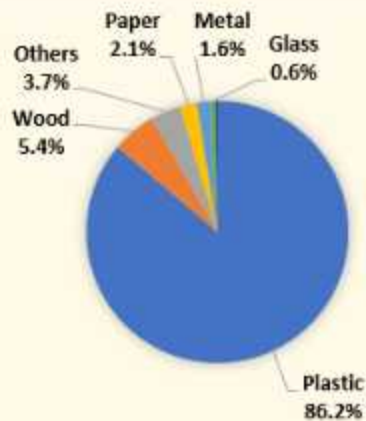
Example of data analysis
Temporal changes in the number and weight of litters

Marine Debris Monitoring

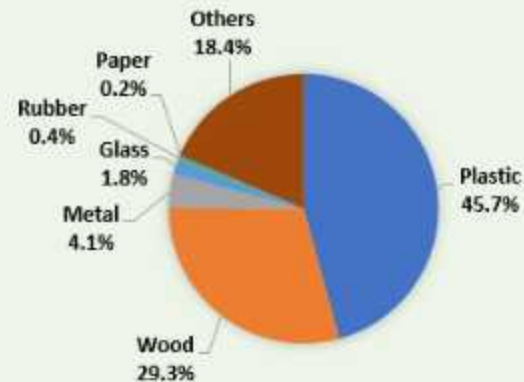
Marine Debris Monitoring result of Labuan Bajo(2019)

2019

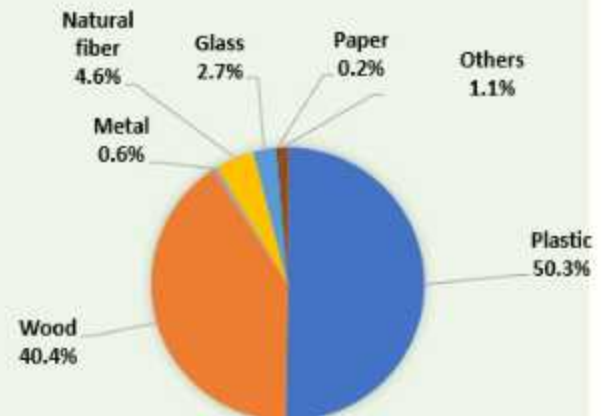
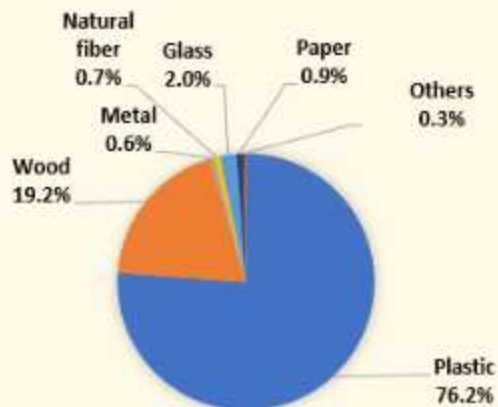
Number



Weight



2021



■ Marine Debris Monitoring result of Labuan Bajo(2019)

10 most common plastic items found on the beach	%
Bottles and bottlecaps	17
Thin Plastic films	12
Food containers	11
Debris from plastic items	11
Debris from plastic items	9
Plastic bags	8
Cigarette butts	7
Ropes	5
Disposable plastic spoon, straws etc.	3
The rest of plastic items except for above items	3
Unidentifiable plastic items	14



New Project Under Progress

■ Enhancement of Marine Debris Management in Manila Bay

- Spatial scope: Philippines
- Temporal period: Total 5 years(2021 ~ 2025 TBD)
- Total capital: about 7,700,000 USD

Capacity Building

- Training on marine debris management on **national** and **overseas (ROK)**
- Training for **communities and stakeholders** targeting **awareness improvement**



Marine Debris Monitoring

- Pilot-scale **marine litter monitoring** on **practical sites**
- Filling up the **data** and reporting



Vessel Provision

- Clean-up vessel provision for **marine floating debris collection**
- 80 tons **Shipbuilding and Delivery**





KOEM

A Public Corporation Creating Future Value Of Healthy Ocean

**Korea Marine Environment
Management Corporation**

THANK YOU
FOR YOUR ATTENTION

UNEA Resolution to End Plastic Pollution including in Marine Environment

Mushtaq Ahmed Memon

Regional Coordinator for Chemicals and Pollution Action
Asia and the Pacific Office

UNEP Support in ASEAN

A historic UNEA 5.2: Resolution adopted to end plastic pollution (res. 5/14)

- Calls for development of international legally binding instrument on plastic pollution including in the marine environment
- UNEP to convene an intergovernmental negotiating committee (INC):
 - Starting work during the 2nd half of 2022
 - Completing by the end of 2024
- An interim secretariat has been put in place to organize work and speedily advance on necessary arrangements and documentation required



Entry Points for the Implementation of the Resolution

- ❑ Build a broad instrument so that it is not just tinkering around the edges of the problem.
- ❑ Be informed by science.
- ❑ Have close engagement and with the involvement of stakeholders.
- ❑ Spur solutions for a new economy.
- ❑ Learn from other multilateral agreements and instruments, but also be ready and willing to embrace new and bold innovations in the multilateral environmental space.



Major UNEP Projects in Asia and the Pacific

- counterMEASURE for Plastic-Free Rivers (Japan funded)
- SEA circular – solving plastic pollution at source (Sweden funded, UNEP & COBSEA)
- Sustainable Consumption and Production – SWITCH-Asia (EU funded)
- GO4SDGs & Stockholm+50 (Sustainable Lifestyles) – Germany funded
- Startups for Green Products and Services (10YFP/OnePlanet – Japan funded)
- Plastics and Tourism (IKI – Germany funded)
- Green Recovery – Tourism and Waste in Pacific (Norwegian funded)
- COVID-19 and Plastic Plight (Norwegian Ffunded)

| Key Knowledge Products



Focal Area: Ganges
Type of CM2 Product: Scientific Report with Data



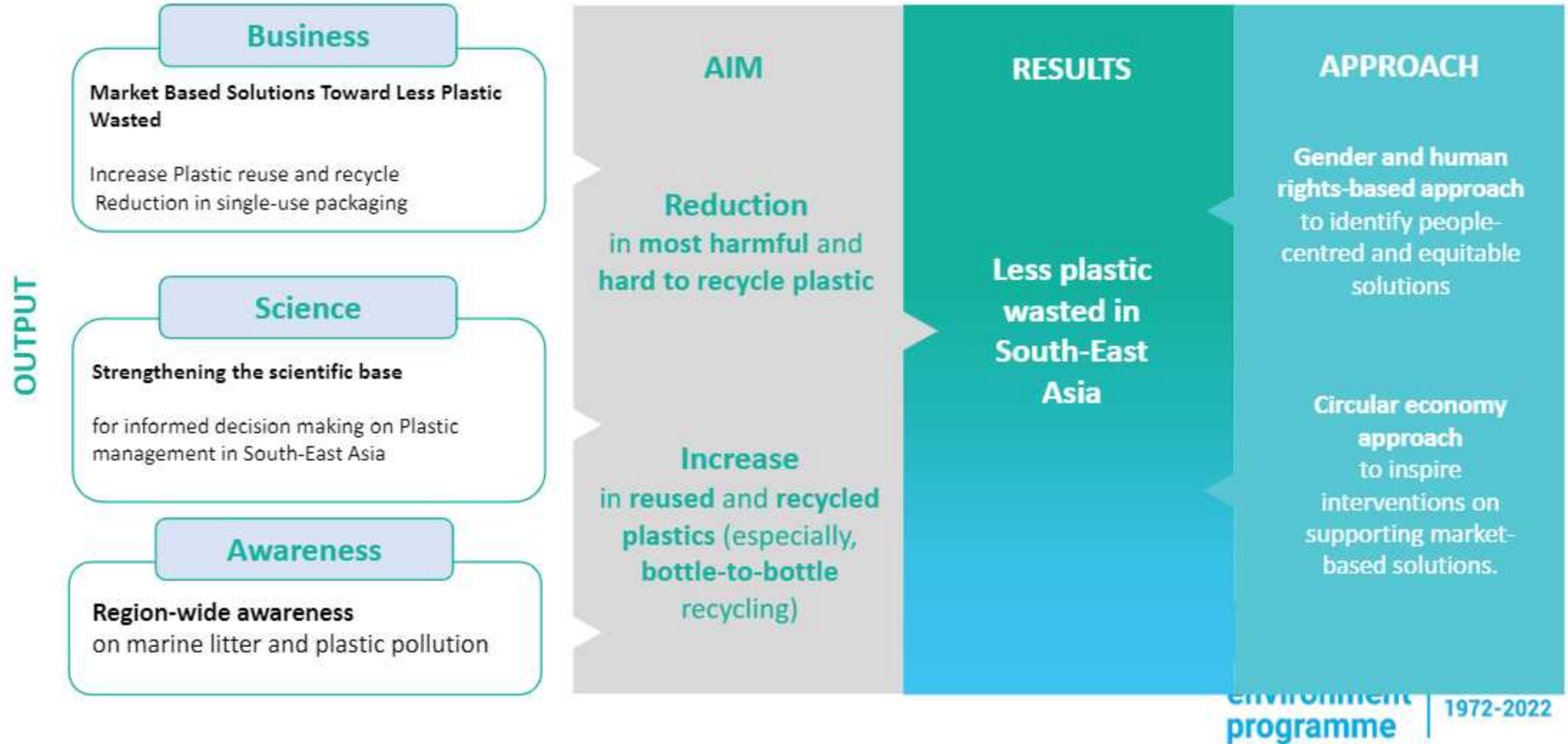
Focal Area: Communications
Type of CM2 Product: Video and Written Interviews
URL:



Focal Area: Migratory Species
Type of CM2 Product: Research Report



SEA circular Project

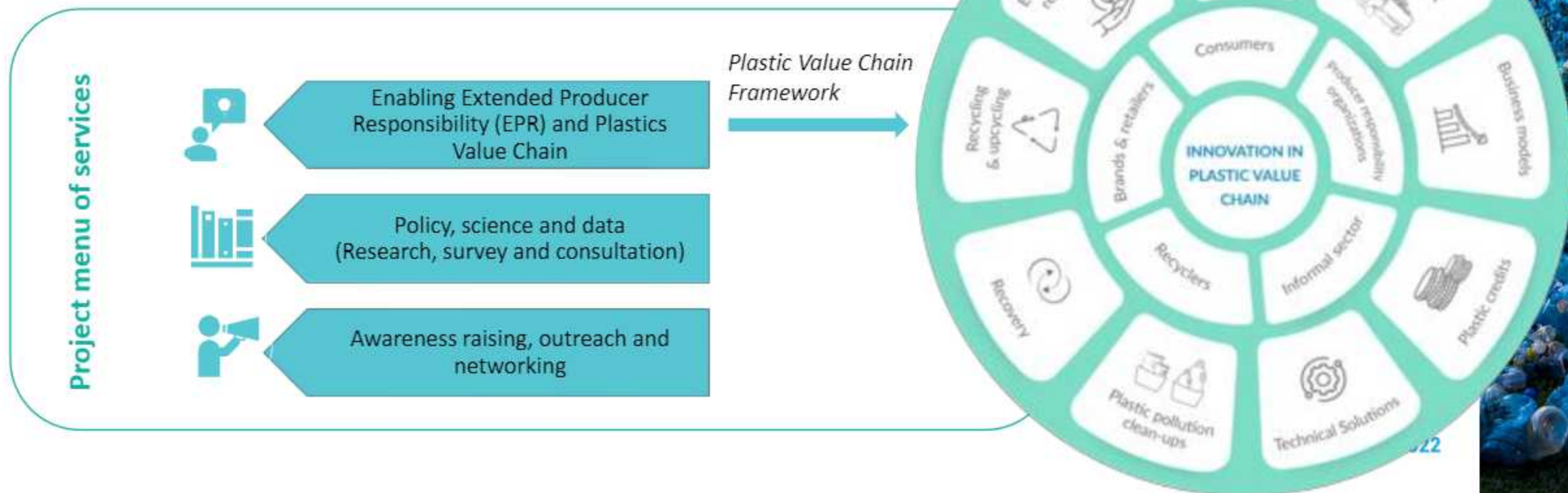


SEA circular – supporting plastic circularity

Participating countries: Cambodia, Indonesia, Malaysia, the Philippines, Thailand and Viet Nam

Knowledge Partner Countries : China, Singapore and Republic of Korea

- Objective:**
1. inspire market-based solutions and
 2. encourage enabling policies to solve marine plastic pollution



Thank you!



7th
7TH INTERNATIONAL
MARINE DEBRIS
CONFERENCE

SAVE THE DATE

7TH INTERNATIONAL MARINE
DEBRIS CONFERENCE (7IMDC)

Date: 18th-23rd September, 2022 **Location: Busan, Republic of Korea**

UN environment programme | **50** 1972-2022

UN environment programme | **50** 1972-2022

MOF Ministry of Oceans and Fisheries

KOEM Korea Marine Environment Management Corporation

GPM Global Partnership on Marine Litter

With contributions from the U.S. National Oceanic and Atmospheric Administration

Find out more: <http://7imdc.org/>



GPM Global Partnership
on Marine Litter

www.unep.org

UN environment programme | **50** 1972-2022

Intervention policies and regulations on single-use plastics restrictions in the ASEAN +3 region and their effectiveness

Youna Lyons, Yulu Liu, Cheng Ling Lim

Centre for International Law, National University of Singapore

ERIA Online Forum: "The way forward for a stronger regional and international cooperation on Marine Plastic Debris"

23 June 2022

1. Introduction
 - a. The Regional Research Inventory (RRI) 2.0
 - b. Single-use plastics (SUP) in the region
2. Methodology
 - a. Our approach
 - b. Model used for analysis
3. Findings
 - a. SUP regulating policies found in the RRI 2.0
 - b. Evaluating policy effectiveness: SUP Interventions - Bans
 - c. General evaluations by publications
4. Towards an international plastic treaty

We are defining “Single-Use Plastic” (SUP) to include:

food packaging,

plastic bottles,

plastic bags,

microbeads found in cosmetic products ...

a. Regional Research Inventory 2.0

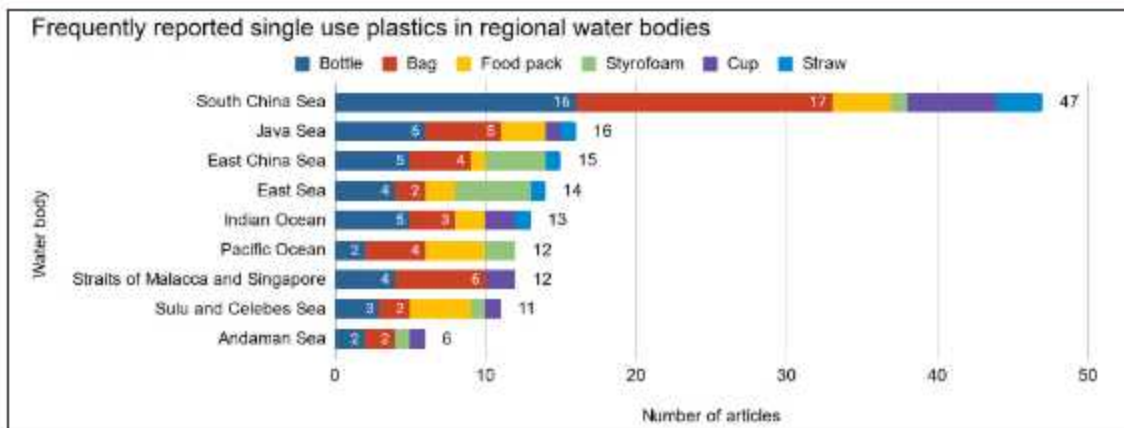
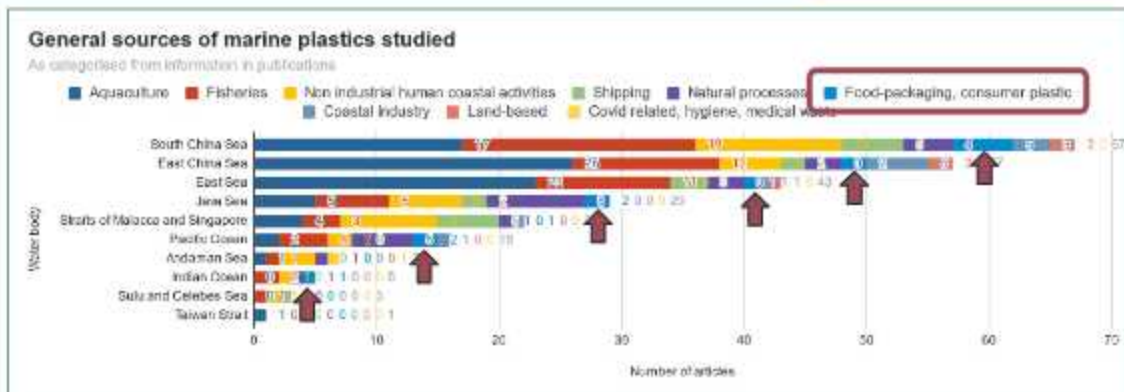
- An inventory of publicly-accessible marine plastic research in the region (ASEAN+3), published between 2001 and June 2021
- As of 21st Feb 2022, the inventory contains 702 publications
- This includes peer reviewed and grey literature such as conference proceedings and NGO reports
- A coordinated effort led by Youna Lyons (NUS-CIL) and Neo Mei Lin (TMSI) with colleagues from NUS and the support of a large regional research team
 - NUS-CIL, **Singapore**: Youna Lyons, Cheng Ling Lim, 刘雨露 (Yulu Liu), Bùi Quang Huy (Bui Quang Huy), Dennis Tan, Dita Liliana, 경다운 (Dawoon Jung), Sng Wen Xin, Vũ Hải Đăng (Vu Hai Dang)
 - TMSI, **Singapore**: Mei Lin Neo, Jenny Fong, Lee Hsien Rong Samuel and Theresa Su
 - Universiti Sains Malaysia, **Malaysia**: Japareng Lalung and his team
 - Swinburne Sarawak, **Malaysia**: Changi Wong and Moritz Mueller
 - Can Tho University, **Vietnam**: Văn Phạm Đăng Trí (Van Pham Dang Tri) and Lê Hoàng Hải Anh (Le Hoang Hai Anh)
 - University of the Philippines-Mindanao, the **Philippines**: Neil Angelo S. Abreo
 - Marine Science Institute, the **Philippines**: Ronan Baculi and Deo Onda
 - Chulalongkorn University, **Thailand**: ชาลิต เจริญพงษ์ (Chawalit Net Charoenpong), ปิ่นมณัส บุชา (Pinamas Bucha), เพ็ญใจ สมพงษ์ชัยกุล (Penjai Sompongchaiyakul) and ราहुล เมห์โรตรา (Rahul Mehrotra)
 - Indonesian Institute of Science (LIPI), **Indonesia**: Sulistiowati and Muhammad Reza Cordova
 - Myanmar Ocean Project, **Myanmar**: သန္တာကိုကျိ (Thanda Ko Gyi)
 - East China Normal University, **China**: 李道季 (Li Daoji) and 朱礼鑫 (Zhu Lixin) and their team

1. Introduction

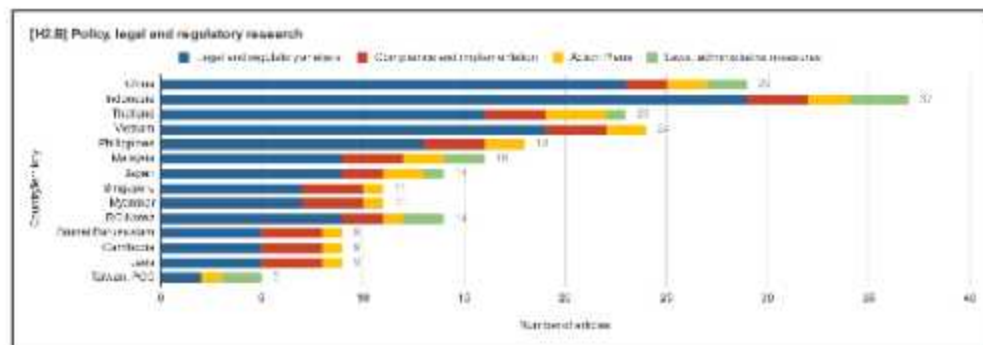
b. Single-use plastics in the region

Based on the articles captured in the regional research inventory 2.0 ...

- Food packing and consumer plastics are among the top 10 reported sources of marine plastic litter item studied
- Plastic bottles, bags, and food packings are among commonly reported single-use plastic items reported in the regional water bodies



a. Our Approach



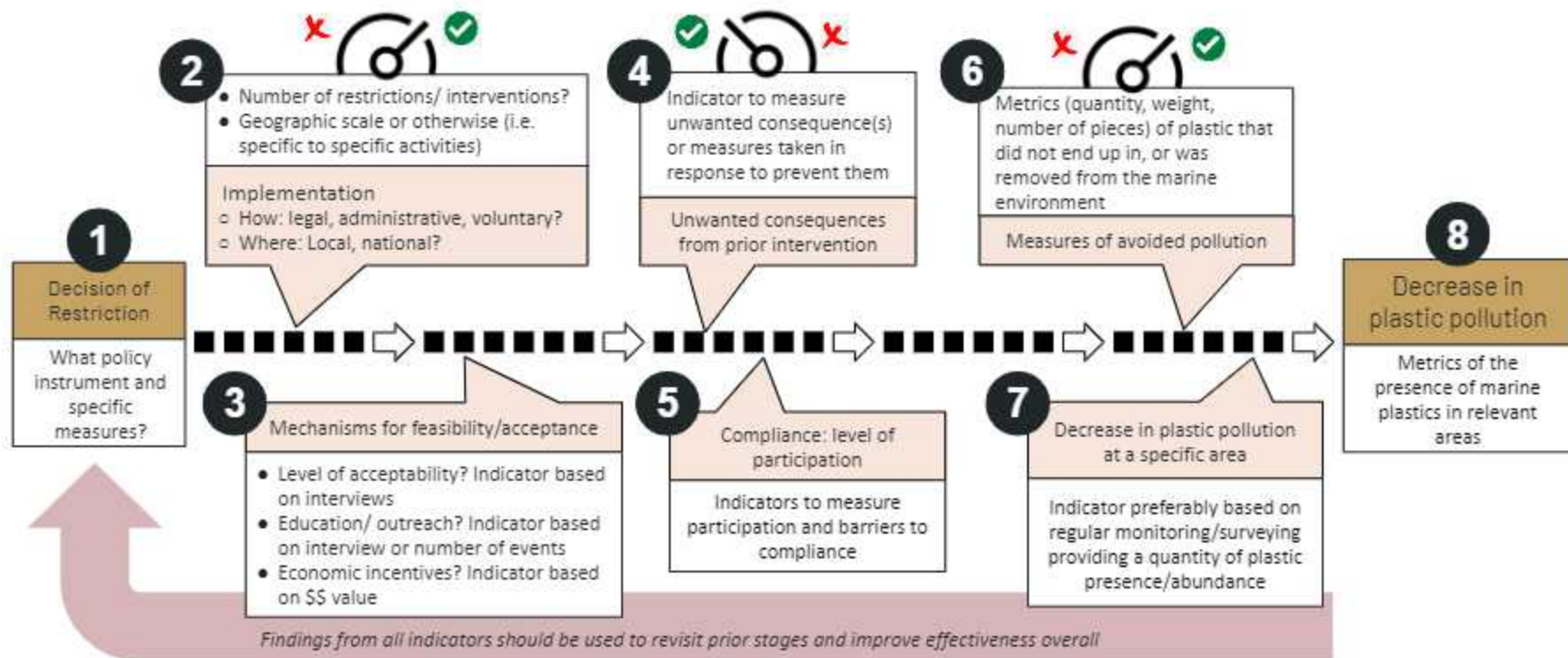
Out of 702 articles in the RRI 2.0, 116 papers were relevant to policy, legal and regulatory research.

1. Review the 702 articles captured in the RRI 2.0
2. Extracted a subset of papers within the RRI 2.0 that examined ...
 - a. existing regulatory policies in the region and/or
 - b. provided elements to evaluate the effectiveness of regulatory policies
3. Analyse the regulations/regulatory policies using our model

2. Methodology

b. Model to evaluate policy effectiveness

Indicators can be considered at different stages of development of intervention and its implementation to evaluate its effectiveness



a. Single-use plastics regulating policies found in the RRI 2.0

Macroplastics:

- **Prohibition:** Ban on certain types of SUPs including thin plastic bags, plastic cutlery (plastic cups and plates), SUPs used in food packaging and delivery (styrofoam containers)
- **Alternative products:** promoting thicker and reusable plastic bags
 - Covid-19 pandemic adds to the difficulties of this issue
- **Economic Incentives:** return schemes, scattered reports in some regional countries, usually start-ups; seldom discussed at the national level
 - Informal sector of waste management is especially important in the region

Microplastics:

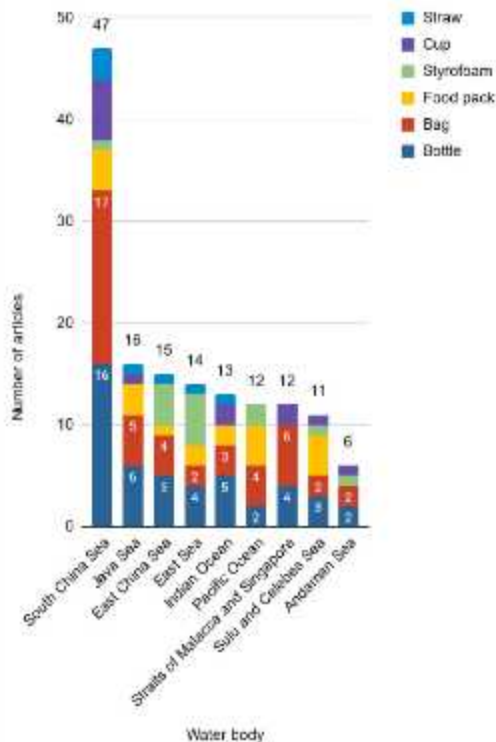
- Research on microplastics have revealed negative impacts on human health, but have not yet been reflected in common policies in the region
- Banning microbeads added in personal care products is a common practice in other countries and regions

3. Findings

b. SUP bans

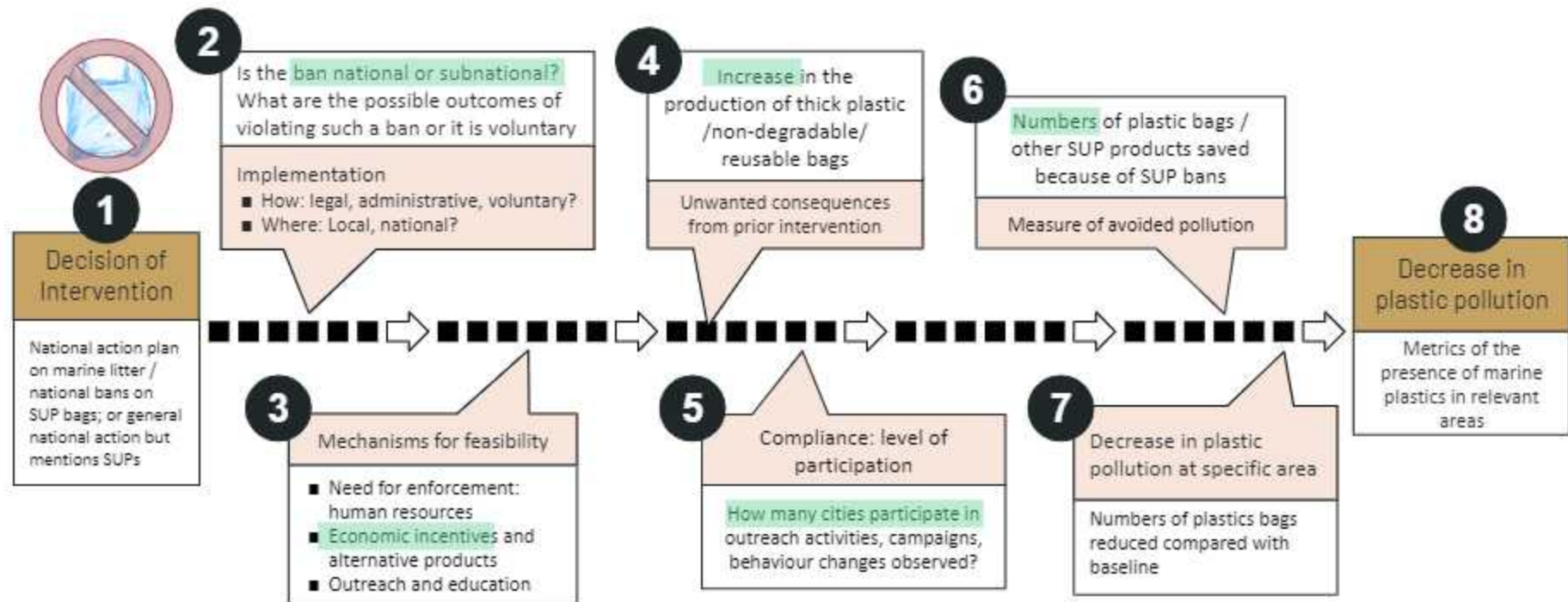
- **Several cities (in the Philippines, in Bali, Indonesia, etc) have banned the use of SUPs** in food packaging, goods delivery (#00144) and SUP bags, plastic straws and styrofoam containers (#00106).
- **In Brunei, plastic bags were banned in supermarkets** in 2019, and the customers were encouraged to shift to reusable bags. Similarly, a ban on plastic straw was imposed in Malaysia in 2018 (#00105).
- **In 2008, Mainland China introduced a charging system** to impose restrictions on using **ultra-thin plastic bags in markets** (#00234), plastic bags <25µm thick were banned from 2008 (#00052). Similarly, in Taiwan, plastic straws were banned in all food and beverage outlets (#00087).
- The city of **Yangon in Myanmar** prohibited the production, use and sale of plastic bags in 2011 (#00052).
- **Vietnam** National Action Plan on Sustainable Consumption and Production focused on **limiting the use of SUPs** by introducing eco-friendly packaging in the supply chain by establishing a linkage between distributors, retailers and suppliers (Ministry of Industry and Trade The Socialist Republic of Vietnam, 2020).
- Publications relating to interventions that do not refer to marine plastics have not been captured in RRI 2.0

Frequently reported single use plastics in regional water bodies



3. Findings

b. Evaluating policy effectiveness: SUP Interventions - Bans



c. General evaluations by publications

- Regulations described do not focus on all types of single-use plastics
 - They focus on specific applications instead (e.g. plastic bags, bottles) and often limited geographic areas
- Mechanisms for compliance, monitoring and enforcement appear generally weak
- Consumers are the primary focus of these regulations
 - Regulations can be designed to target other sectors of activities, as identified in the literature as major sources of plastic pollution (e.g. manufacturers, aquaculture, tourism, construction)
- There was a lack of information on return schemes and other economic incentives
- Funding appears lacking for research on new interventions and the evaluation of effectiveness

4. Towards an international plastic treaty

Genesis of global governance of plastic pollution

- The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) was created in 1995 as an intergovernmental mechanism to tackle the issue of land-based pollution.
- Formation of UNEA followed the 2012 UN Conference on Sustainable Development
- UNEA Res 1/6, 2/11, 3/7, 4/6, 4/7 and 4/9 affirm “the urgent need to strengthen global coordination, cooperation and governance to take immediate actions towards the long-term elimination of plastic pollution, in marine and other environments, and of avoiding detriment from plastic pollution to ecosystems and the human activities dependent on them.”

4. Towards an international plastic treaty

2022 UNEA 5.2 Resolutions

- 14 Resolutions adopted at 2022 UNEA 5.2
- Relevant to marine plastics:
 - **Resolution to End plastic pollution: Towards an international legally binding instrument**
 - UNEP/EA.5/Res.14: Requests the Executive Director to convene an intergovernmental negotiating committee, to begin its work during the second half of 2022, with the ambition of completing its work by the end of 2024;
 - Resolution on an Enhancing Circular Economy as a contribution to achieving sustainable consumption and production
 - Resolution on the Sound Management of Chemicals and Waste
 - Resolution on the Future of the Global Environment Outlook

The negotiation of the new treaty is expected to include regulations, definitions and guidance on upstream processes, which are relevant to the regional context.

Regional best practices in single-use plastics interventions could also contribute to the discussion at the international level. ASEAN + 3 region as a global hotspot of plastic pollution, countries' perspectives and national interests are expected to be critical during the negotiation of the global treaty.

Thank you for your kind attention

We welcome feedback and enquiries: civ109@nus.edu.sg or lcl@nus.edu.sg



Photo: Freepik



Photo: Adobe

APPLICATION OF EPR SYSTEM IN ASEAN

EDWIN SEAH



Photo: Adobe



MARINE PLASTIC DEBRIS – HOW WE GOT HERE

- Failure of waste management systems & lack of infrastructure
- Plastic waste imports
- Dependence on informal sector
- Small scale, uncoordinated & largely ineffective efforts at national & regional levels
- Cheap plastics
- Importance of the plastics industry a conflict of interest
- Covid-19



Photo: Freepik

EXTENDED PRODUCER RESPONSIBILITY

- Extended Producer Responsibility (EPR) has been around in ASEAN for years.
- With EPR being talked about for many years in ASEAN, the question remains as to why AMS have been so slow in implementing EPR?
- One could speculate but questions on design, responsibility, implementation, monitoring, reporting and enforcement have gone unanswered.
- Even Singapore, which had announced in 2020 plans to introduce a DRS this year have since delayed it further.
- Several MS – Vietnam, Indonesia and Malaysia – have seen the introduction of industry-led Producer Responsibility Organizations (PROs).

RETHINK NEEDED OF EPR IN ASEAN



Photo: Adobe

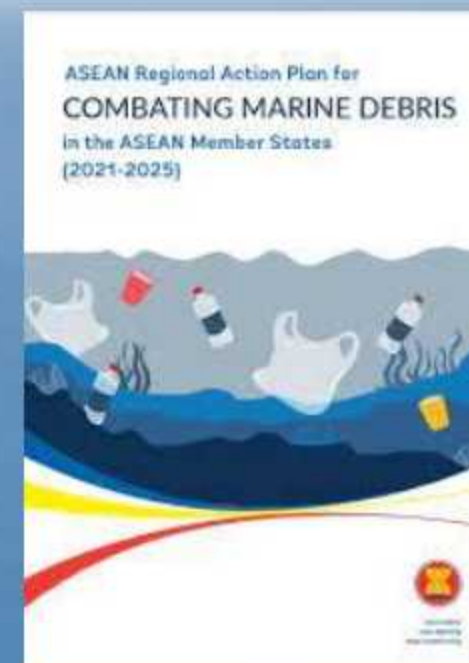
- EPR is a misnomer – marine plastic debris is a value chain problem that requires a value chain solution
- PRAISE in Indonesia has coined a more accurate term > Extended Stakeholder Responsibility
- EPR in the way it is applied in the EU and US might not be fit-for-purpose for ASEAN
- EPR will be ineffective in ASEAN because of:
 - Low compliance, poor monitoring & weak enforcement
 - High dependence on and presence of a significant contingent of informal waste collectors
 - Poor waste collection and management
 - More than 50% of waste in ASEAN is uncollected
 - Of those collected, only a quarter is recycled

ROLE OF GOVERNMENT

- EPR should not absolve governments of their responsibility to provide basic waste management services, similar to defence, education & healthcare.
- Govts should also provide and upgrade infrastructure to minimize waste leakage into waterways, rivers, oceans.
- Each AMS should introduce a mandate for producers & users of all plastics to report usage, disposal & recycling rates, with appropriate penalties for failure to comply.
- The time has passed for voluntary measures, best practices & guidelines > If ASEAN and ASEAN MS are serious about tackling the marine debris problem, they need to start implementing policies that have bite.
- They need to (1) stem the flow of new plastics (2) clean up what's already there and (3) prevent more from entering the marine environment.

OPPORTUNITIES

- Because of the inefficiencies outlined earlier, ASEAN is 5-10 years away from being able to implement 'western' EPR system.
- EPR is not a silver bullet and will not solve ASEAN's marine debris problem even if implemented today, but other solutions can help make significant progress.
- The study commissioned by Food Industry Asia and Alpha Beta showed potential reduction of 800,000 tonnes of marine plastic debris annually in just 4 countries.
- These solutions are still valid today but ASEAN needs to seize the moment afforded by its Regional Action Plan and the recent UNEA 5.2 resolution for an international legally binding instrument by 2024.



Top 3 levers with potential to significantly reduce annual marine plastics leakage



INDONESIA

421,800 tonnes

Increased collection services



Materials recovery facilities



Waste exchange programmes



PHILIPPINES

112,870 tonnes

Materials recovery facilities



New sanitary landfills



Waste exchange programmes



THAILAND

109,585 tonnes

Increased collection services



Low-value plastic subsidies



Materials recovery facilities



VIETNAM

155,370 tonnes

Import limitations



Increased collection services



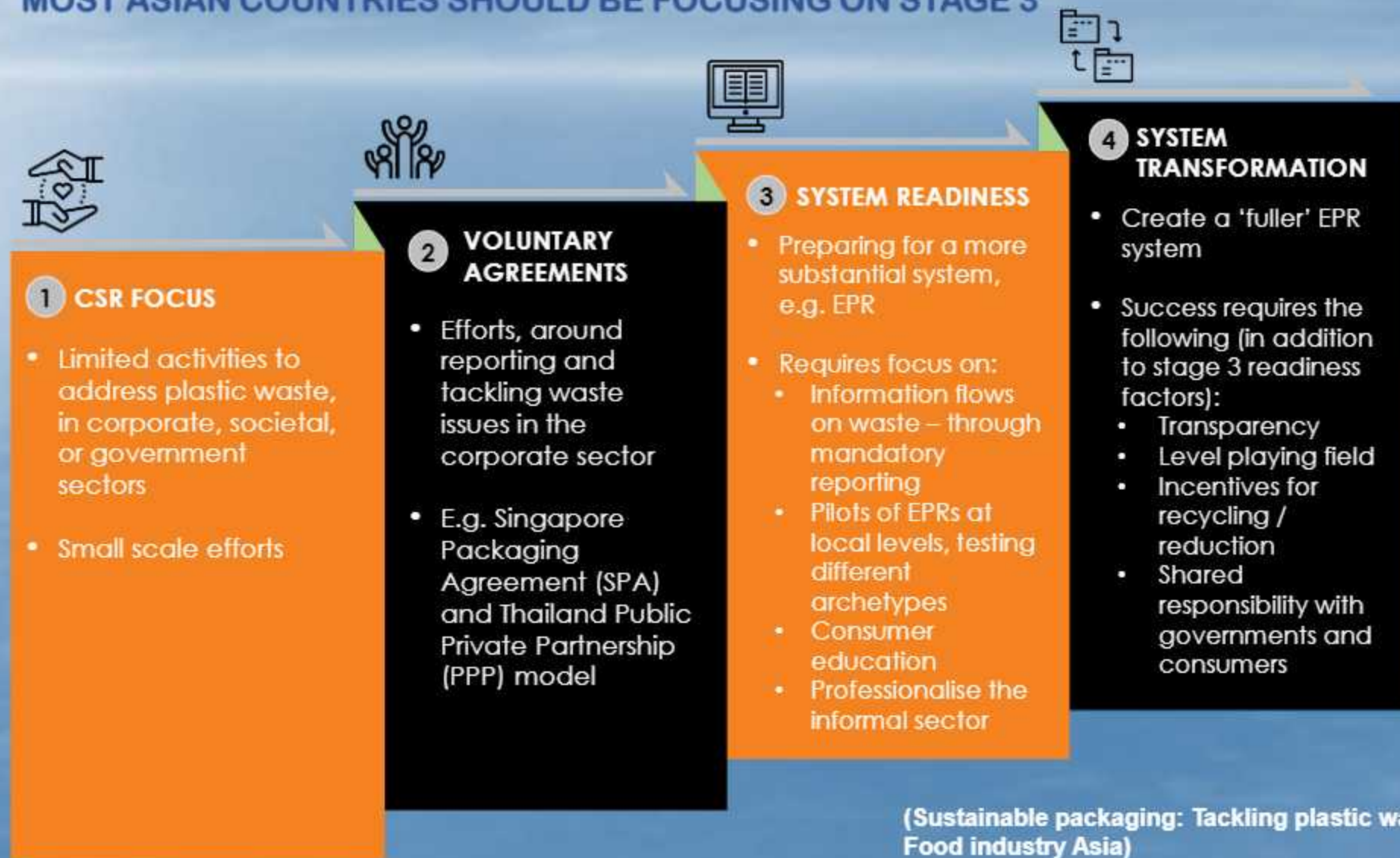
Water way infrastructure



(Sustainable packaging: Tackling plastic waste in Southeast Asia, Food Industry Asia)

PHASES OF MATURITY OF REGULATORY MANAGEMENT OF WASTE ISSUES

MOST ASIAN COUNTRIES SHOULD BE FOCUSING ON STAGE 3



RECOMMENDATIONS

1. A **central coordinating body** to look at **Funding; Data; Policy Coordination & Standardization; Waste Management & Minimization and Recycling Infrastructure; Manpower** (including transitioning the informal sector to the formal waste management system).
2. Across each AMS, identify what are the gaps and **channel funding & expertise accordingly**.
3. Consider a **“tiered EPR”**
 - In larger urban cities with a critical mass and mature waste management system, EPR as we know it can be implemented.
 - For rural & smaller cities, a different form needs to be introduced, e.g. a **“hub & spoke”** approach sector – centralise waste collection and disposal in the middle of a cluster of cities to facilitate waste treatment.

RECOMMENDATIONS

4. As we learned from the pandemic, to stem it, certain **restrictive measures need to be implemented immediately.**
5. Consider a **blanket tax on the production of virgin plastic across ASEAN.**
 - This will create a level playing field (otherwise if such a tax is applied only in certain countries, it would just encourage manufacturers to shift to a 'cheaper' country).
6. In line with UNEA 5.2, it is time to move away from voluntary efforts and for governments to step up by stepping in with **mandates & policies.**
7. As with climate change and NDCs, ASEAN and its MS should **establish an NDC for tackling marine plastic debris by the end of 2022**



Thank You

Photo: Adobe

Edwin Seah
edwinsqs@yahoo.com



Directions for Sustainable Plastic Waste Management and International Cooperation between Korea and ASEAN

ASEAN Forum on marine plastic debris
(Jun 23, 2022)

Prof. Yong-Chul Jang, Ph.D

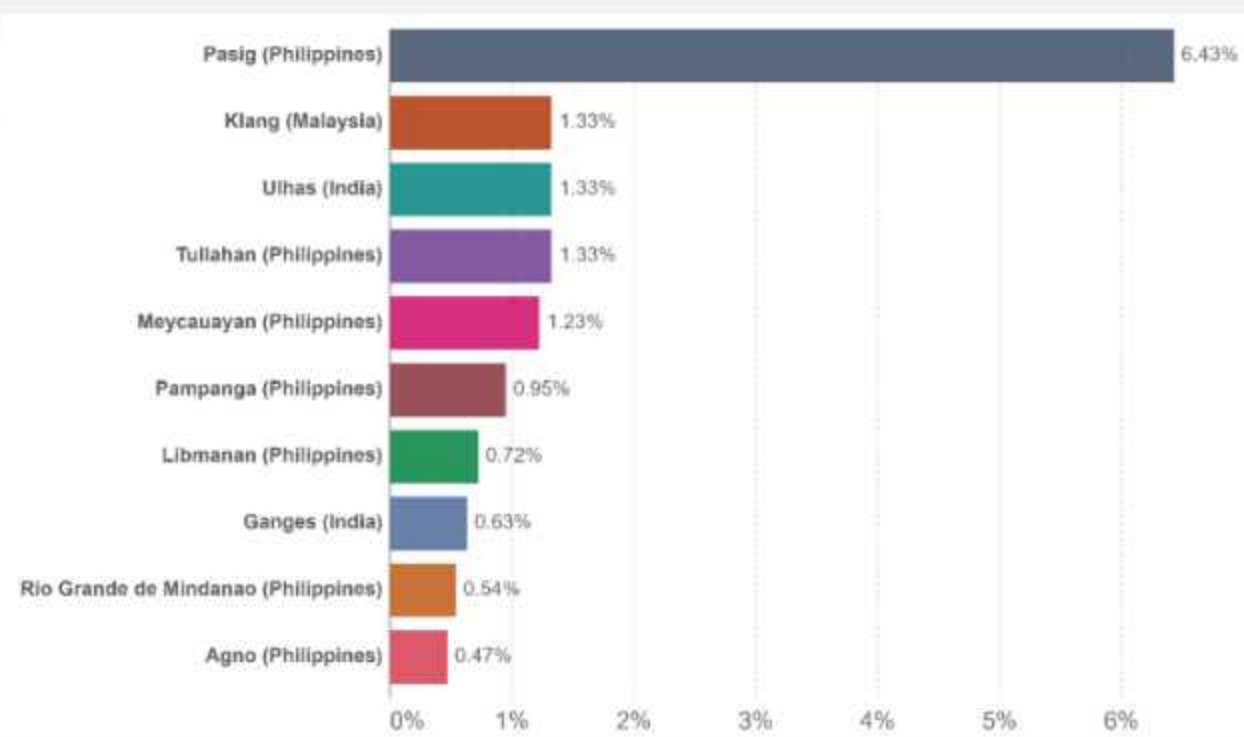
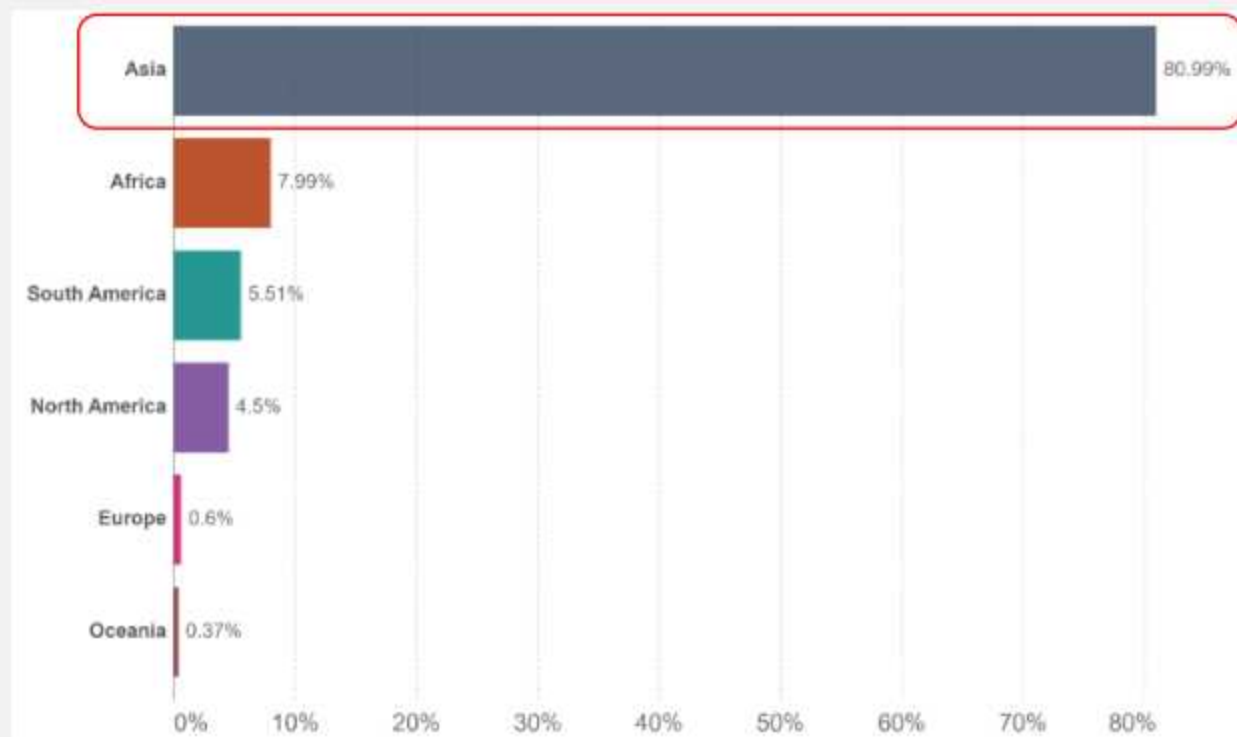
Department of Environmental Engineering

Chungnam National University

1. Current Problems and Issues

Plastic Pollution by mismanagement practices is the most severe in ASEAN Region.

- ✓ The regional generators of mismanaged plastic waste include **Southern Asia, Eastern Asia, and Southeast Asia**.
- ✓ **Top 10 rivers** responsible for global marine plastic pollution are located in Asia



2. Potential Impacts of mismanagement of plastic waste

Impacts of mismanagement plastic waste are significant across sectors and layers with damages not only to our surrounding environment but also climate changes, economy, biodiversity, and food security

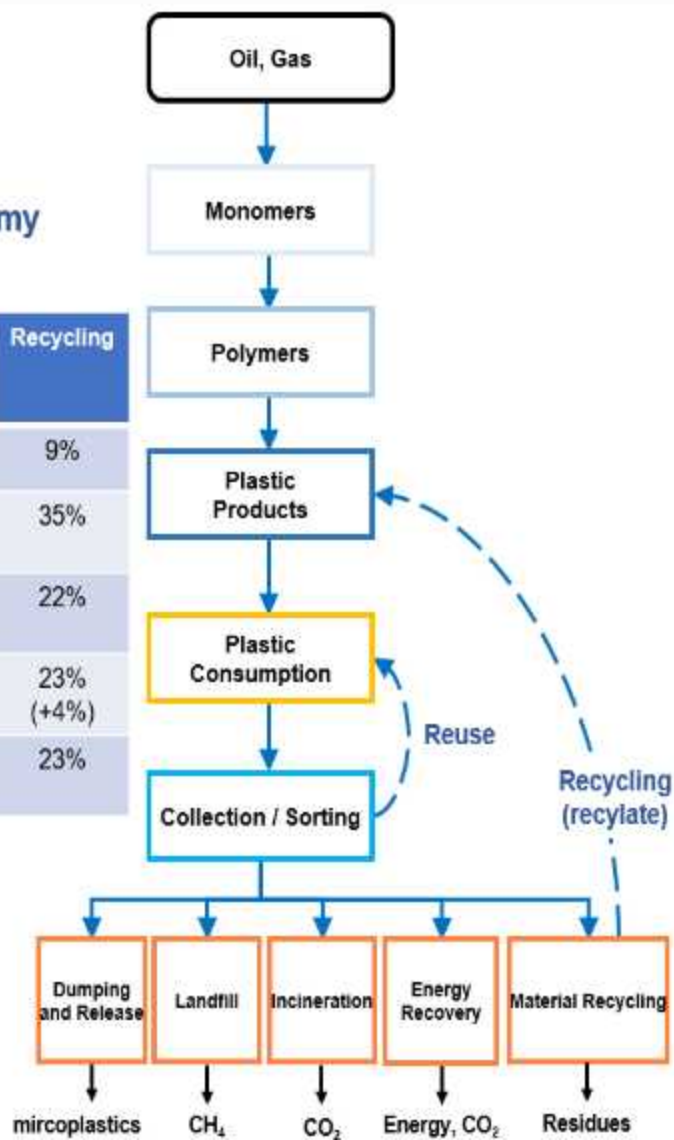


3. Current Problems of Plastic Linear Economy

Fossil fuel-based Plastic Economy (linear economy)

Countries	Dumping and landfills	Incineration w/o ER	Energy Recovery	Recycling
World	79%	12%		9%
Europe (2020)	23%	42%		35%
USA (2014)	58%	20%		22%
Japan (2018)	8%	8%	57%	23% (+4%)
Korea (2017)	5%	33%	39%	23%

(Source: UNEP, 2015; Plastic Europe, 2021; Geyer et al., 2017; Japan PWMI, 2020; Korea MOE, 2019)



1. Current Plastic Linear Economy

- Fossil fuel-based plastic economy **heavily rely upon linear economy** (mass production-mass consumption-mass disposal)
- In the world, **79% dumping and landfills**, incineration 12%, and recycling 9%

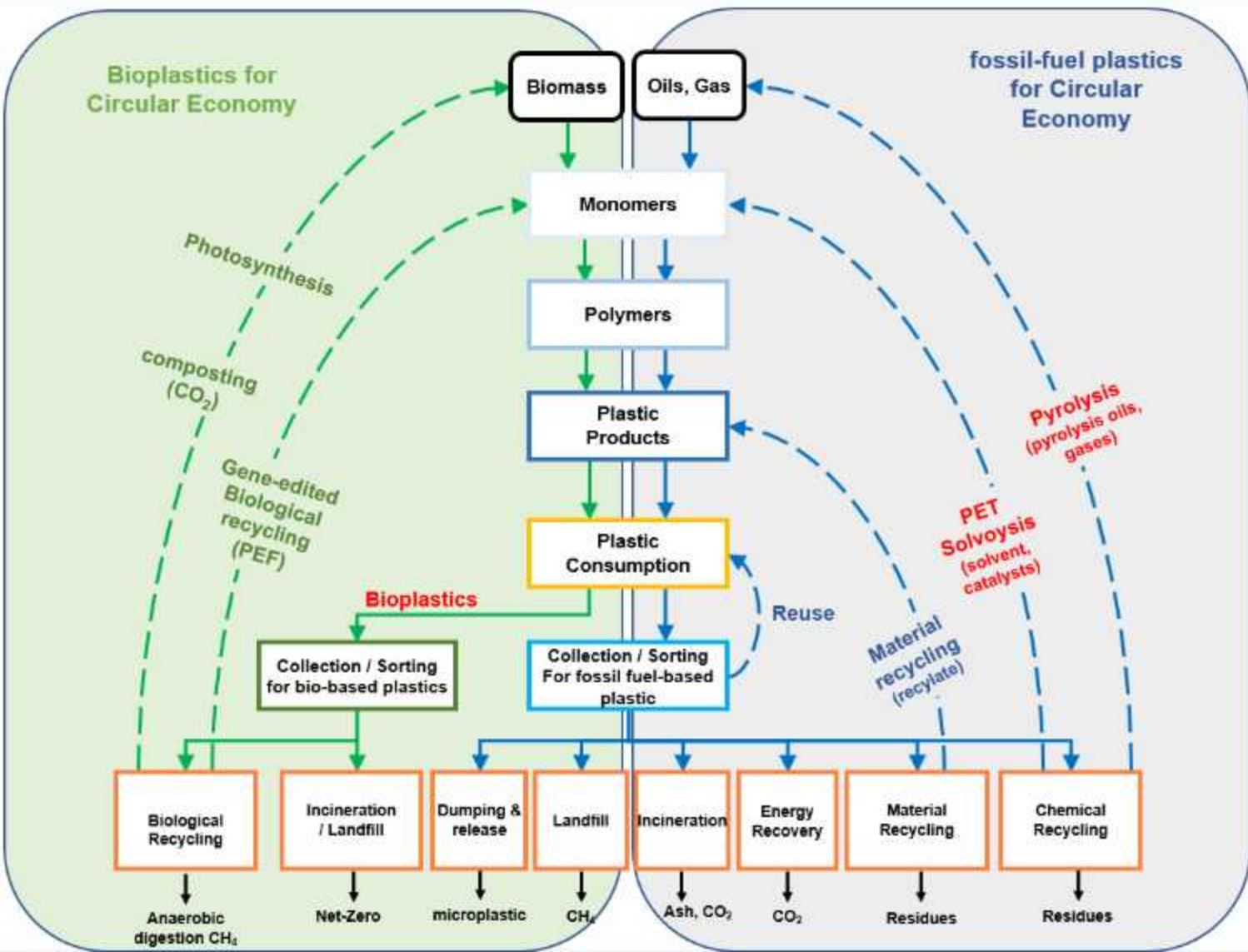
2. Limited plastic circularity

- Limited reuse and material recycling are practiced due to **technical barriers** (e.g., additives, chemicals), **economic barriers** (e.g., low quality, high cost for treatment), and **social barriers** (e.g., low collection rates, lack of awareness)
- Even many high-income countries are struggling dealing with massive plastic waste and are trying to establish plastic circular economy

3. Plastic pollution and marine debris

- ASEAN and East Asia are the regions with the most polluted areas with plastics in the world
- There is an **urgent need for developing international cooperation** to solve plastic pollution in oceans and rivers for conserving ecosystems

4. Future Framework of Plastic Circular Economy



1. Fossil-fuel Plastics for Circular Economy

- Fossil fuel-based plastic economy should rely on circularity by adopting **chemical recycling** as well as material recycling
- Plastic consumption, especially single-use plastics should be reduced and **reused**
- **Circular plastic production with econ-design** is very important and should be incentivized
- Plastic products with recycled content can be promoted and encouraged

2. Bioplastics for Circular Economy

- In the long-term, **bioplastics** can replace current fossil fuel-based plastic, which will contribute to reducing carbon emission
- Bioplastics for circular economy can be established by overcoming technical, social, and economical barriers (e.g., economics, efficiency, end-of-life, ethics, education)
- In Korea, **bioplastics will replace all fossil fuel-based plastics by 2050**, according to carbon-neutrality 2050 plan

5. Measures and directions towards a plastic circular economy in Korea

Regulatory

- Support **legal framework, monitoring and performance data** on circular plastic economy
- Provide **economic incentives** to support circular plastic business (e.g., eco-modulation)
- Promote **public sector procurement** policy for recycled content use in plastic products

Economic

- Promote **circular business models** (sharing/reuse models, zero-waste shops, circular collection and recycling business)
- Establish **efficient collection, sorting and processing of plastic waste materials** with ICT

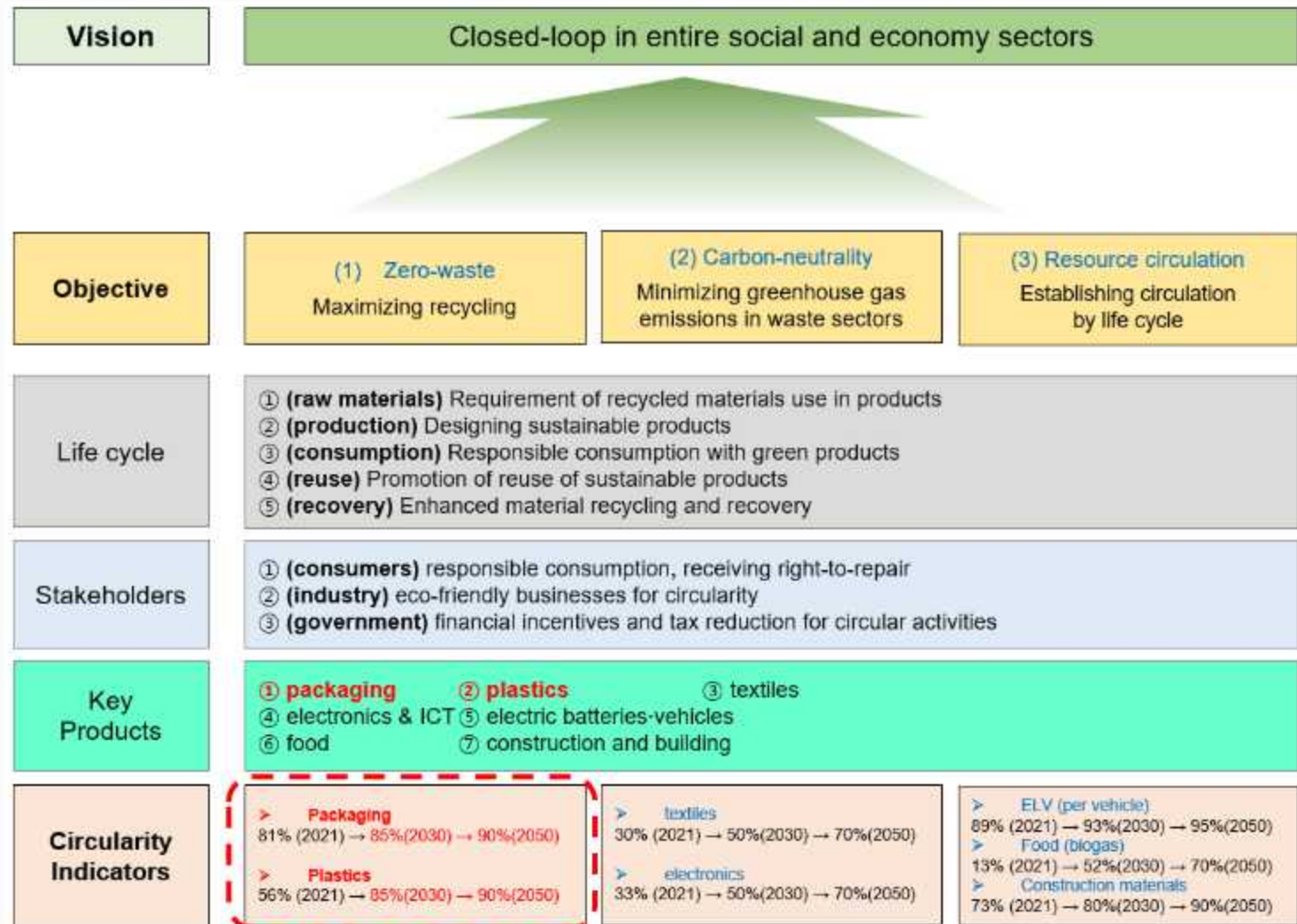
Technological

- Develop **circular plastic product designs** by producers (e.g., multi-layers) following guidelines
- Need to **invest R&D in technologies** associated with circular plastic economy

Social

- Need for **raising public awareness** on plastic circular economy and responsible consumption
- Establish **circular supply chains of plastic in local government** by communicating stakeholders

6. K-Circular Economy Action Plan (2021) and Implementation



1. Development K-Circular Economy Action Plan

- > **Announcement: Dec 31, 2021**
- > **Objectives:** zero-waste, carbon neutrality, and resource circulation
- > Adopting life cycle management approach (from extraction of raw materials to end-of-life) by considering circularity
- > Engage all stakeholders (e.g., consumers, key industry sectors, governments, NGOs)
- > Plastic products with recycled content can be promoted and encouraged

2. Innovation and technical R&D investment by implementing K-Circular Economy Action

- > Period: year 2024~2030 (7 years) waiting for approval
- > Budget: 500 million USD (all 7 sectors)
- > Objective: Development of key technologies and implementation of K-Circular Economy Action Plan
- > Key sectors: **packaging, plastics**, textiles, electronics, electric vehicle battery, food, and construction

7. International Cooperation for solving plastic pollution in ASIA region



(위클리 리포트)
전국점 Starbucks에 대해 친환경
연식 카페로서 인증을 받은
서울시도, 전 연령 서비스 포함



충남대학교 친환경 캠퍼스 조성사업



Future Directions

- 1** Developing **policy measures and action plan** for plastic circularity
 - Developing strict policy measures (banning, restricted use) on single-use plastics (SUP)
 - Introducing EPR system for plastic waste by considering country's context and resources (legal, financial, operational mechanism)
- 2** Fostering **research, innovation, and capacity building** for plastic circularity
 - Strengthening ASEAN regional knowledge network on plastic pollution
 - Developing training material program and monitoring assessment
 - Implementing clean-up of plastic pollution and marine debris in severe areas
- 3** Raising **public awareness, education and outreach**
 - Promote public awareness on status and impacts of plastic pollution by campaigns, TVs, SNS networks, other mass media
 - Encourage more implement plastic-zero waste movement and zero-waste shops (e.g., refill stations, selling products without packaging)
- 4** Enhancing **international cooperation on knowledge transfer and capacity building between Korea and ASEAN**
 - In Korea, EPR system for sustainable waste materials has successfully been operated since 2003
 - **Technical, policy and implementation know-how of Korea** with advanced waste management system can be shared for knowledge transfer and capacity building in ASEAN with high plastic pollution

Figure. Plastic-free zero waste movement and public awareness in Korea

7IMDC (www.7IMDC.org)

Sunday, 18th of September to Friday, 23rd of September, 2022

7th INTERNATIONAL MARINE DEBRIS CONFERENCE (7IMDC)

Busan, Republic of Korea

TRACK 6 Circularity and Waste Management (11 Sessions)

Track ID | TS 6.4

Title | SOLVING PLASTIC POLLUTION IN ASIA BY BUILDING INTERNATIONAL PARTNERSHIPS AND COOPERATION

Format | Presentation-based with Q&A

Length | 60 minutes

Co-chairs | Yong-Chul Jang (Professor, Chungnam National UNIVERSITY, Vice President and International Chair of Korea Society of Waste Management), Sea-Cheon Oh (Professor, Kongju National University)

➤ 7IMDC dedicates to tackle the issues of marine litter and plastic pollution

: All relevant stakeholders by bringing together governments, industry, academia, civil society would discuss the latest science, strengthen collaborations, find solutions and catalyze action to address the urgent, global problem of marine litter and plastic pollution

Thank you for your attention!

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